FLORIDA WILDLIFE

November—December 1984

BEFORE YOU GO

A 10-Point Checklist for the Responsible Hunter

- ☐ 1 Are you familiar with all the game laws and regulations that apply to the species you plan to hunt?
- ☐ 2 Are you familiar with your game's habits, and can you readily identify the species in the field?
- ☐ 3 Are you familiar with how properly to clean and care for your game?
- ☐ 4 If you're planning to hunt on private land, are you sure that you have permission from the landowner and understand where you may hunt on his land?
- ☐ 5 Are you familiar with the safe and proper operation of the gun you'll be using?
- ☐ 6 Is your gun clean and in good working order?
- ☐ 7 Are your gun and ammunition appropriate for the game you'll be hunting?
- ☐ 8 Is your ammunition the proper match for the gauge or caliber gun you're bringing along?
- ☐ 9 If using a rifle, is it sighted in?
- ☐ 10 If appropriate for your type of hunting, have you brought along your hunter orange vest or coat and cap?

NSSF
National Shooting Sports Foundation
P.O. Box 1075
Riverside, Conn. 06878

Florida Game & Fresh Water Fish Commission
Publisher

John M. Waters Jr.
Editor

John Roberge
Art Director

Trisha Spillan
Assistant Editor

Pam Stephens
Circulation Manager

William Greer
Contributing Photographer

Electronic Typesetting
Florida Game & Fresh Water Fish Commission Word Processing Center

Editorial Assistance This Issue
Henry Cabbage
Arienne Wallace

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NOTICE: The next serial issue (January-February 1985) will be identified as "Volume 39, Issue No. 1" in order to synchronize our issue numbers to the calendar year volume binding standard.

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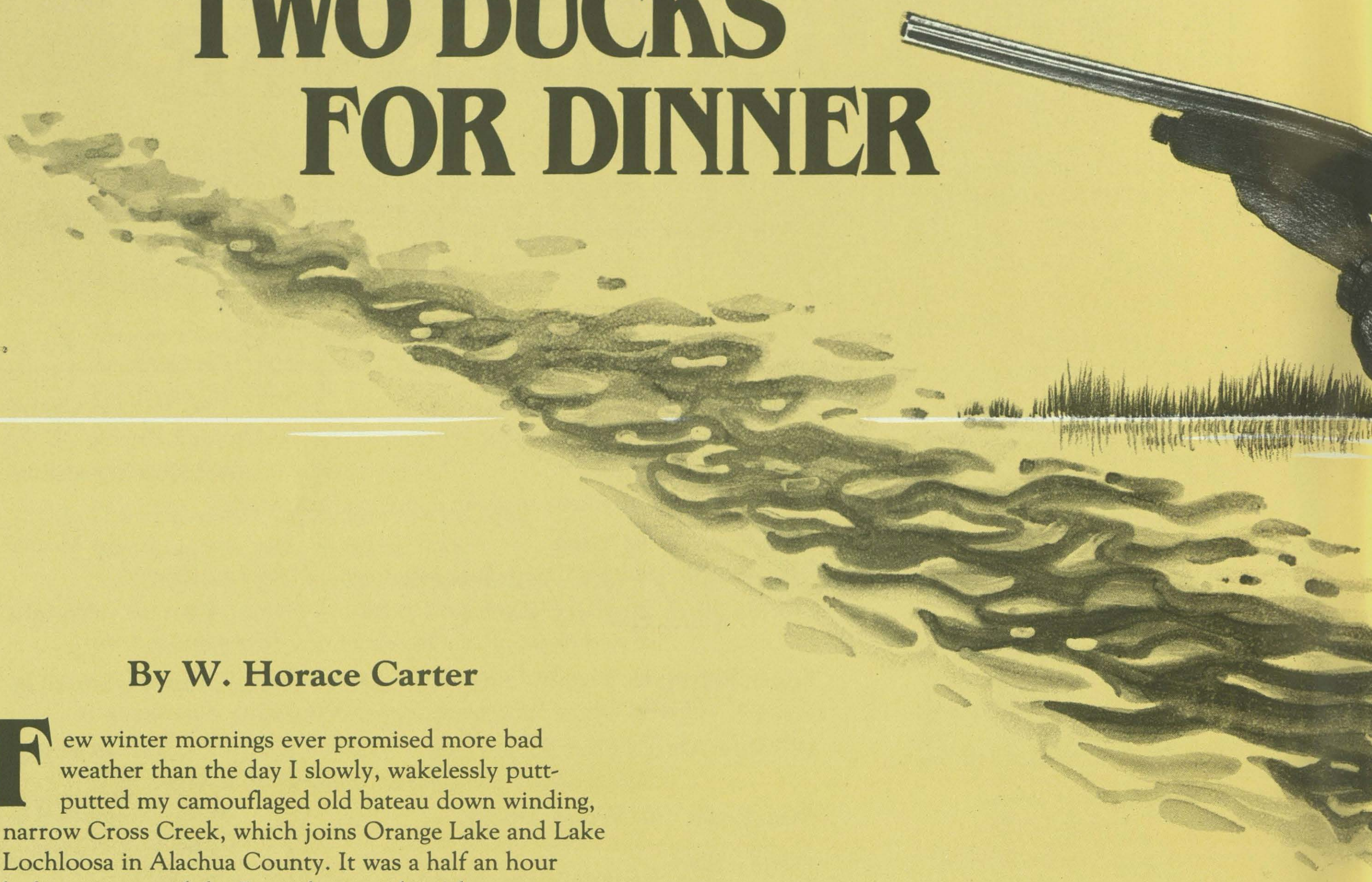
TWO DUCKS FOR DINNER



By W. Horace Carter

Few winter mornings ever promised more bad weather than the day I slowly, wakelessly putt-putted my camouflaged old bateau down winding, narrow Cross Creek, which joins Orange Lake and Lake Lochloosa in Alachua County. It was a half an hour before sunup and the Spanish moss-draped cypress trees along the swampy shoreline reached toward the sky, their silhouettes providing the only navigational markers on a dark, moonless morning. But I knew the 13,160-acre hydrilla-filled Orange Lake was just around another bend and there would be little trouble feeling my way a half mile or so to Seven Sisters or Twenty Brothers. These landmarks were so named because of their clusters of stately cabbage palm trees which once grew on two tiny knolls that barely surface above the maidencane and bulrushes which characteristically lace every foot of this ragged shore.

An occasional splash broke the silence as I eased through the lily pads. Maybe another leopard frog or an old mossybacked turtle was paddling away, after being disturbed so early in the morning. A hog-like grunt, followed by a much louder thrashing of water, was an old mama alligator crawling off her tussock, scrambling through the grass bed as my boat challenged her right to that watery territory.

It began to rain. A cold northeast wind whipped at the lilies and their pale undersides appeared in pastel colors as the very first faint rays of dawn pierced the timber line. By then I could see a little.

Cold, rain and wind; these are the ingredients for good duck hunting in central Florida. It is not often one could be fortunate enough to experience such a morning with all three desirables, but that day was one. I was soon in a position to shoot wood ducks, which I knew harbored in the coves around one of Orange Lake's minor tributaries, River Styx. They would be flying low; looking for a choice place to fill their crops at daybreak.

I had not counted on a flock of coots which literally covered acres of quiet waters on the lee side of Grassy Point, another Orange Lake landmark. They had taken refuge there during the night. When I motored right through their roosts, they fussed long and loud, protesting with good reason at being rousted awake.

Their squawking sent a message of disapproval as they scattered, then settled a few hundred yards away, still jabbering and hostile. Once they were out of the way, I tied the boat to a handful of sawgrass, then slumped to the deck to make little or no impression on the sharp eyes of the expected woodies.

As I shivered in the morning coolness, waiting, I heard the air being fanned violently. I knew this meant ducks were flying close by. Barely visible in the grayish dawn, I watched a half dozen wood ducks whiz by with the wind at their tails. I didn't even get a shot. They were gone in an instant.

Soon, there was that tell-tale fanning in the cold morning air again as three low-flying woodies flew, just yards away, coming directly overhead. I sat up quickly, put the old Browning to my shoulder and, with fingers numb from cold and shaking with anticipation, I pulled the trigger.

The lead duck dropped like a toy airplane that had lost its motor. Instantly, I sighted down the barrel at a

second duck, almost overhead, and pulled the trigger again. An old male woody folded his wings and likewise plunged into the water, landing almost within reaching distance.

It was barely dawn by then. I had pushed myself out of bed only an hour before, drank down some black coffee, climbed into that old boat and felt my way across the darkened lake to the memorable spot where I had smiled with success many times before.

Yes, I had been uncomfortable for a time, but the two ducks were my reward. It was natural. This is what life for the hunting outdoorsman is all about. You brave the elements and the cunning of the creatures. Sometimes you win; sometimes you lose, but there in the dawn surrounded by beauty untouched by man, I was a winner that day. As I picked up my two fine ducks and stuffed them into my old coat pocket, it was a good feeling. I cranked the little outboard and chugged off toward the mouth of Cross Creek.

Some people would call my hunting cruel; some would call it punishment. I call it happiness, a way of life for me and for many others, which I hope will never perish from this earth. □

"HELLO? DISPATCH?"

Choice Moments on Radio Dispatch Duty

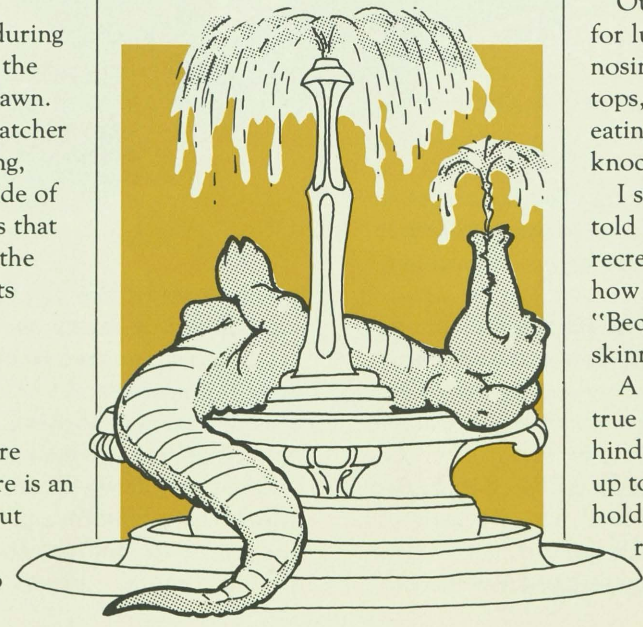
By
Laurel Shaina Latimer

I work in an interesting job, in the Game and Fresh Water Fish Commission's Division of Law Enforcement as a radio dispatcher. One minute, everything can be moving along routinely, but the next instant, something very serious—maybe even tragic—can occur.

You never know what may happen or when. It could be during regular daytime hours, late in the evening or sometime before dawn. Regardless of the hour, a dispatcher has to be prepared for anything, anytime. That is the serious side of this job, but as with most jobs that involve much public contact, the constant avalanche of incidents brings a few lighter moments, including bright and funny comments, descriptions and questions.

In a state where alligators are protected and numerous, there is an abundance of complaints about them. The majority of these complaints are turned over to Commission alligator control agents for further investigation as to whether or not each poses a threat to humans or their property. Some alligator complaints are not routine.

It is a constant source of amazement to me the predicaments alligators continually find themselves in. They get reported for blocking expressway exits, railroads, jogging paths and even airport runways. Sometimes they take leisurely swims in the ocean, residential or hotel swimming pools, bathtubs, little puddles and even huge ornate water fountains.



Our callers have reported them for lurking, peeking in windows, nosing up to screens, sitting on roof tops, jumping from tree to tree eating oranges and yes, even knocking on doors!

I still remember the time a man told me an alligator was "ruining his recreational life." When I asked how this was so, he replied, "Because he lives where we want to skinny dip!"

A woman caller once asked, "Is it true alligators can stand up on their hind legs, walk like a man and run up to 40 miles an hour?" I had to hold back my immediate mental response: "Sure he can, but only if he uses high-octane fuel."

There are funny moments with officers, too. They are very rare times, though, because of the strict radio procedures we adhere to. Still, every now and then, one will . . .

Then there was the time a man called to report he had "accidentally" shot a large alligator in the head. When he realized it was still alive, he called to have a wildlife officer come out and finish the job. Meanwhile, he wanted to know if it was okay to eat the tail.

On the really outrageous side, I have spoken to people who swear they've been chased by gargoyles, have seen hundreds of robins lying stoned drunk on Brazilian pepper fruits or watched opossums take showers in washing machines and then head for the dryer.

A gym owner once called to ask me to have a raccoon removed that he'd managed to trap. When I suggested that he release it into the woods himself since he had it contained, he told me, "There's no way I'm going near him; he's been in here all night bench pressing and he's got muscles on him you wouldn't believe!"

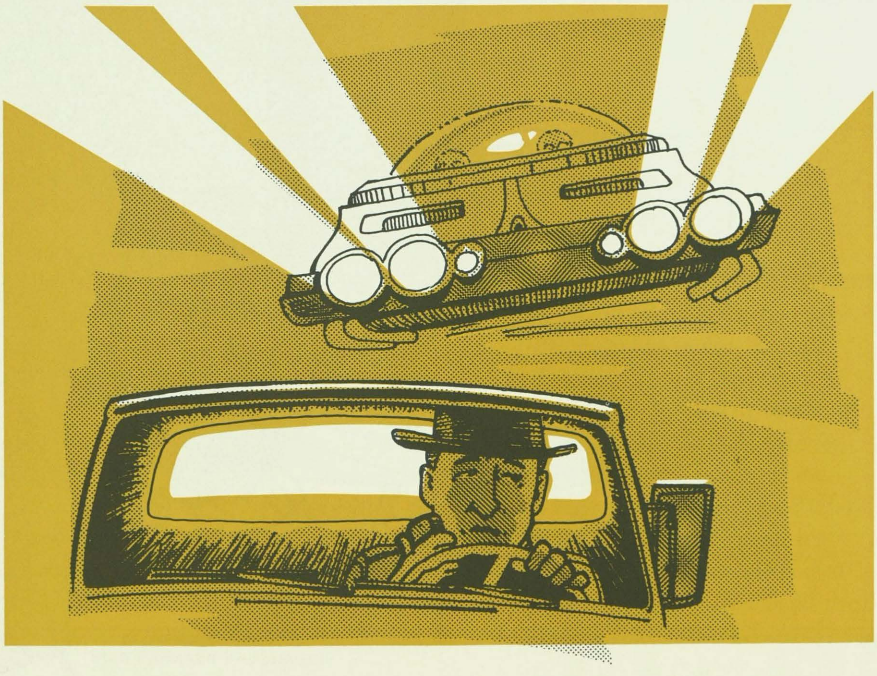
And not to be outdone, one guy called to relate the story of how he'd almost been kidnapped by "Big Foot" and then proceeded to say, "And that's not the first time something strange has happened to me out by those caves."

Sometimes there are moments of confusion when someone sees something that appears very different from what it really is. A good example occurred the night we had a report of "a man shooting from a tree stand at deer." When the officer arrived, he quickly discovered there had been a man all right, pretty high up in the trees too, but it was only a billboard. To be exact, it was a picture of a hunter with a rifle in one hand and a beverage in the other. Close, but no cigar!

Then there are the brain teasers: "What's got a head like a water moccasin, is two and a half feet long, has a tail like an alligator, a body like a mudfish and has green and purple stripes all over?" a laughing caller asked.

I answered in jest, "I'm not really sure but, whatever it is, I wouldn't keep it in the house overnight." There are funny moments with officers, too. They are very rare times, though, because of the strict radio procedures we adhere to. Still, every now and then, one will slip by quickly and, hopefully, go unnoticed, but not always.

Late one night, an officer (who shall remain nameless) asked me if I knew of any "rockets" that had just been launched. Initially I reacted silently to myself, thinking, "What am I now? Mission Control, too?" But instead, I sputtered, trying hard not to laugh, "10-54 (no), unable to advise." As the officer signed off the channel, he sounded very distressd. After a few people snickered anonymously on the air, he suddenly began to realize that everyone now knew that he'd thought he'd just seen a you-know-what, but didn't want to admit it. ▷



Being a radio dispatcher can be interesting, provocative and sometimes very funny, but calls are usually from intelligent people with a highly developed and keen sense of civic duty, as well as concern for the welfare and safety of wildlife. They are of great help to our ability to serve the public. It is from calls made by these concerned citizens, with their detailed tips involving license tag numbers, vehicle and person descriptions, names and directions that some of our best cases are made.

Dispatch is an integral part of the Division of Law Enforcement's public service and a vital communication link between wildlife officers and the public. Often, their first knowledge of a need for investigation, rescue or other service comes on their radio, through the dispatcher's voice.

Although wildlife officers are primarily involved in protecting our game, freshwater fish and other wildlife, they also are duly-appointed, sworn, law enforcement officers with complete arrest powers. In addition to their regular patrol and investigative duties, they often assist other law enforcement personnel in various, sometimes dangerous, capacities.

This can, and has, included cases of homicides, kidnappings, rapes, plane crashes, drug busts, confiscations, drunken drivers, arson, stolen or suspicious vehicles and domestic fights. In the course of their duties, they sometimes find dead bodies in the woods, canals, along the roadways or in trunks of vehicles.

Wildlife officers also investigate boating accidents, conduct search and rescue operations, capture nuisance wildlife, assist stranded motorists and generally offer help to anyone who needs it.

Whether the wildlife officer accidentally happens upon a bad situation or is requested by another agency to respond because he is closest or knows the area best, he must respond. It is inevitable that each time something out of the ordinary happens, the likelihood increases that he may become involved in a high speed chase, shots may be fired, or possibly someone might be injured.

Unlike many law enforcement personnel, wildlife officers ususally work alone, sometimes a long way from immediate help should it be needed. This makes the "life line" provided by the Commission's radio dispatchers that much more crucial.

There are often sad and tragic occasions, too... medical help, death notification... search and rescue...

There are often sad and unnecessarily tragic occasions, too. Campers and hunters sometimes need medical help, death notifications have to be delivered and, on search and rescues, there are sometimes casualties.

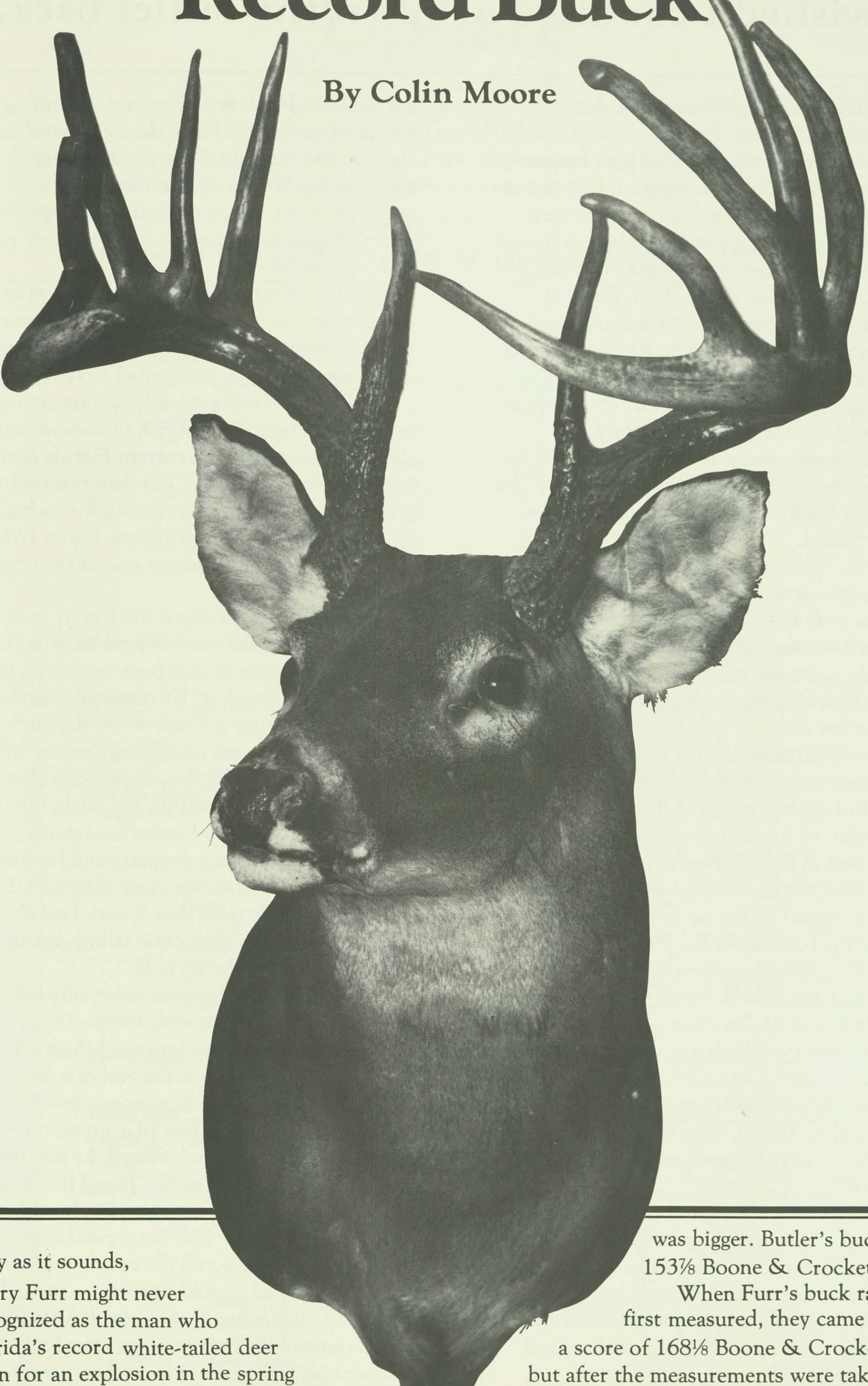
One incident happened quite recently when four adults were cited by an officer for not having life preservers with them in the fishing boat. Later that day, the same officer spotted the same individuals again; they smiled and waved to him, displaying the new life preservers they had just purchased in order to comply with boating safety regulations. It wasn't until several hours later that we had a report that their boat had capsized and that two of the men had drowned, while another had been hospitalized. Officers arriving on the scene discovered the four life preservers floating alongside the men in the water. They were still wrapped in their original plastic packaging from the store, unopened and unused.

There is nothing unique about any of the incidents I'm relating; any dispatcher in the state can probably add quite a few to the ones I've mentioned, some equally as tragic, perhaps more.

Our responsibility is not one to be taken lightly. People's lives depend on us. ☐

Florida's Record Buck

By Colin Moore



Crazy as it sounds, Larry Furr might never have been recognized as the man who harvested Florida's record white-tailed deer had it not been for an explosion in the spring of 1983. He never would have sought the record in the first place if his friends hadn't urged him to. He had seen the previous state record buck, belonging to H.M. Butler, also of Quincy, and Furr thought his rack was bigger. Butler's buck had scored 153⅞ Boone & Crockett points.

When Furr's buck rack was first measured, they came up with a score of 168⅛ Boone & Crockett points, but after the measurements were taken, the paperwork was lost and Furr never received official notification. After a few years, Furr forgot about his application to the Florida Buck Registry, satisfied that the trophy mount hanging over his fireplace was all the ▷

Stan Kirkland-Photograph

"It fell right there, and the moment I knew I had killed it, I wished I could have taken the bullet back."

recognition he really needed. Then an accident happened.

Furr, who was working for a bottled gas company in Quincy, was frying fish with a propane cooker one day at a company get-together when gas from a leaking propane bottle exploded and enveloped him in flames.

He spent the next 37 days recuperating in a hospital and thinking for many long hours about the next hunting season. He frequently flexed the fingers of his injured hands so he would be able to handle firearms when the upcoming season started.

While Furr was convalescing, news of his accident circulated throughout the north Florida area. A Commission employee read a newspaper story of the incident and recalled that a few years earlier, Furr had brought the huge buck rack in to be measured as a potential state record.

Following this, Furr's rack was determined to be the top Florida record—it scored more than 14 Boone & Crockett points over the old mark.

The rack has 14 tines and the longest is 8½ inches long. The largest circumference of a main beam is 5¼ inches and the widest spread between the two main beams is 18 inches.

The rack is symmetrical, but the tips of a couple of tines were broken off and that detracted from the overall score. In fact, had not 10⅞ Boone & Crockett points been deducted for nonsymmetry, the rack would have been the first in Florida ever to qualify for the Boone & Crockett listing, which does not include any rack scoring less than 170 Boone & Crockett points.

The current top-10 racks in the Florida Buck Registry, which is officially maintained by the Commission, now range from 146⅜ Boone & Crockett points to 168⅛ Boone & Crockett points. It's reasonable to expect that the bottom rungs may change by a few points, however, as trophy racks get measured after future hunting seasons take place.

Hunters who want their trophy racks measured should contact any of the Commission's regional offices listed on page 48.

Perhaps more Gadsden County bucks such as Furr's and Butler's will wind up in the top 10. For reasons not easily pinpointed by wildlife biologists, that county's farmlands and pine forests consistently produce trophy deer, but it is known that several factors contribute to the development of antlers, including quality food supply and the right balance of minerals.

A few years ago, wildlife biologists caught and relocated deer from various offshore Georgia islands to the middle part of that state, where there was virtually no deer population. Although the island deer seldom attained weights over 100 pounds, offspring of the relocated deer moved into the rich agricultural area of Georgia and have since reached live weights approaching 300 pounds in their new range. The improved food supply of their new range allowed the resettled deer herd to reach its full genetic potential in a new generation.

Another factor which indirectly affects antler development is hunting pressure. Bucks reared in regularly hunted areas are less likely to reach the five- or six-year age when peak antler development occurs.

Florida's deer will probably not attract very many nonresident hunters in search of massive racks, but that's not to suggest the current Florida champion—Furr's buck—is anything less than extraordinary. The state record for Alabama, known for its big bucks, is 172⅝ Boone & Crockett points. Furr's 168⅛-Boone & Crockett point rack ranks as one of the finest ever taken in the South.

Although Furr harvested the trophy buck more than seven years ago, the story behind the hunt is fresh in his mind. He first saw the big buck crossing a highway, two years before he took it. He obtained a farmer's permission to hunt on land where the buck lived, then spent the next couple of hunting seasons looking for it. He saw it occasionally, but never got a shot.

"Other people hunted the big buck, but it was a well-kept secret. Not many hunted it—mainly just the farmer who owned the property and his kinfolk," Furr recalls. "No one else ever came close to killing it, I guess. Somebody once shot it with bird shot, though. When I dressed it, shot came falling out all over the place from just under its hide."

Incidentally, the deer was never officially weighed, but Furr estimates, "It went maybe 190 to 200 pounds, live weight." He finally harvested the buck on the Gadsden County farm at the end of a January day in 1977. It was late, just after sunset, and Furr was stalking along a wooded fence row of a soybean field where he knew the buck often fed. Ahead, he saw the buck before it saw him. He slowly raised his 30-06 rifle to his shoulder, missed his first shot, but hit the running buck high in the shoulder with his second shot.

"It fell right there and the moment I knew I had killed it I wished I could have taken the bullet back," Furr said. "It's a fine trophy and I'm glad I've got it, but for about two or three minutes after I shot it, I just had this sinking feeling that I had taken a magnificent animal out of its domain."

Considering the magnitude of his accomplishment, it is understandable Furr would feel a rush of emotion. After all, it was *the biggest buck ever bagged in Florida.* □

Florida Buck Registry
Update

Since our story about the Florida Buck Registry ran in last year's November-December issue, a number of additions have been made to the official list of Florida's record bucks. They are listed below, up through press time for this issue. If you want to know more about the registry, or if you want to have your trophy buck scored, contact any of the Commission's offices listed on page 48.

Florida's Top 10 Record Bucks Through October 1984

Hunter's Name	Where Taken	Year Taken	B&C Antler Score	No. of Tines
Larry Furr	Gadsden County	1977	168 1/8	14
Danny Raines	Jackson County	1973	154 3/8	10
H.M. Butler	Gadsden County	1979	153 7/8	12
Bill Scharber	Pasco County	—	153 5/8	10
Nancy Sumner	Liberty County	1981	152 3/8	12
Charles P. Lykes Jr.	Highlands County	1977	150 6/8	11
C. Frank Jones	Levy County	1957	149 2/8	10
D.E. Weaver	Okaloosa County	1971	147 1/8	10
Shorty Roberts	Gadsden County	1967	147 1/8	10
Rodger Lee	Jackson County	1983	146 3/8	10

Northwest Region—Top Six

Hunter's Name	Where Taken	Year Taken	B&C Antler Score
Larry Furr	Gadsden County	1977	168 1/8
Danny Raines	Jackson County	1973	154 3/8
H.M. Butler	Gadsden County	1979	153 7/8
Nancy Sumner	Liberty County	1981	152 3/8
D.E. Weaver	Okaloosa County	1971	147 1/8
Shorty Roberts	Gadsden County	1967	147 1/8

Northeast Region—Top Five

Hunter's Name	Where Taken	Year Taken	B&C Antler Score
J.T. Reynolds	Taylor County	1983	140 4/8
Donald Bailey	Madison County	1983	137 6/8
Butch Baker	Madison County	1983	136 7/8
James Jeffers	Clay County	1981	136 4/8
W.H. Carrol	Columbia County	1975	132

Central Region—Top Five

Hunter's Name	Where Taken	Year Taken	B&C Antler Score
C. Frank Jones	Levy County	1957	149 2/8
Ronald L. Waldron	Orange County	1975	144 5/8
Randy Alderman	St. Johns County	1966	142 3/8
W. Bryant Adams	Osceola County	1959	140 3/8
Reed Kempfer	Osceola County	1974	139 4/8

Everglades Region—Top Five

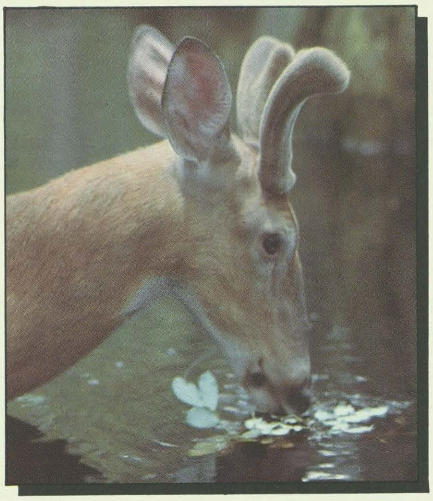
Hunter's Name	Where Taken	Year Taken	B&C Antler Score
James N. Orth	Indian River County	1966	131 1/8
Bucky Flowers	Collier County	1980	119 4/8
Robbie Johnson	St. Lucie County	1983	118
John Ouellette	Brown's Farm WMA	1983	117 4/8
Michael H. Trexler	Palm Beach County	1982	116 4/8

South Region—Top Five

Hunter's Name	Where Taken	Year Taken	B&C Antler Score
Bill Scharber	Pasco County	—	153⅝
Charles P. Lykes Jr.	Highlands County	1977	150 6/8
Stanley Gude	Pasco County	—	140 2/8
Henry Boyett	Pasco County	1955	137 2/8
Jim Sessoms	Pasco County	1967	132 6/8

Summary of Antlers Scored	Qualified	Not Qualified
Northeast Region	70	6
Northwest Region	152	32
South Region	55	1
Central Region	72	23
Everglades Region	9	3
Subtotal Scored	358	65
Total Scored	423	

FROM VELVET TO TROPHY RACK



One of the fastest growing tissues found anywhere in the animal kingdom is a buck deer's antlers. Often called "horns" by Florida deer hunters, antlers are structurally and physiologically different from horns. Antlers live for part of the year, then die. Horns, on the other hand, live continuously. Antlers are solid, calcified, nearly symmetrical arrangements of beams and tines. Horns are nearly symmetrical, but are constructed of an outer layer of "cornified" tissues with an inner bony core.

Antlers on Florida's white-tailed deer usually begin their growth cycle during early spring, at which time the tops of the animals' heads have a mere skin patch where the previous year's antlers grew. Antlers begin to grow as small "buds" which have a complex, dense network of blood vessels connecting to the deer's scalp. Growing antlers are covered with "velvet," a skin covering which has an outer surface with many short, fine hairs. Velveted antlers are soft and warm to the touch.

As budding, velveted antlers grow, they may be injured easily, but deer are very careful when their antlers are in velvet. Injuries are not all that common. If an injury does occur, however, the antlers for that year may be permanently deformed.

With the very rapid growth of antlers, white-tailed deer also undergo a molting and regrowth of body hair. Together, these two growth processes consume a considerable amount of body energy and, of course, require adequate nutrition.

Nutrition is one of several significant factors affecting how well-developed and how large a buck's antler rack grows. Just as important as the ready availability of vitamins, starches and proteins are minerals—especially calcium and phosphorus compounds.

Heredity also plays an important role in not only the size, but the shape of an individual buck's antlers. In the natural selection of Florida's deer herd, bucks with strong, well-shaped large racks tend to sire young bucks that also grow up to have nice racks.

Antlers are usually considered a male trait, but sometimes does (females) grow antlers. When a doe grows antlers, they are almost always small. The biological reason for antler growth on deer, males or females, is always related to levels of testosterone and other hormones present in the individual animal.

Over the year, as day length changes, testosterone levels vary. Normally, they are quite low in does, but have annual peak periods in bucks. When a doe's natural testosterone reaches an unusually high level, antler development may occur.

When young bucks are living in crowded conditions, and older, dominant bucks are present, testosterone levels in these young bucks can be suppressed below the levels normally found in uncrowded herds. Under these conditions, antlers on the young bucks may be very much on the small side.

A common misconception about deer antlers is that bucks "gain a 'point' on each beam each year." This is not so. For mature bucks in their prime, there is seldom any difference from year to year. However, because their skeletons are also growing, young bucks may grow better racks each year, as their skeletal growth is completed. When young, their racks often will not have as many tines, nor be as large, as when they mature.

From spring through summer and up into fall, all the factors of heredity, nutrition, population density and hormone balances are at work as antlers grow. In north and central Florida, usually before deer hunting season

Several factors influence the remarkable growth of antlers.

Text and Photographs

By John Waters Jr.

opens, antler growth is completed and the velvet covering begins to molt. (In the Everglades, velvet drop peaks in June or July, but there is much variability, and individual deer are seen there in velvet throughout the year. And, throughout the state, some individuals may lose their velvet after the normal time.) By this time, the interior of the antlers' growing network of vessels and structural cells has hardened, and there is no further need for the velvet, even though the velvet is still alive.

It was once thought that when the time came to shed the velvet, the growing basal rings of each beam of the antlers had something to do with cutting off the blood supply to the velvet, and that this triggered the velvet shedding. It is now known this is not so.

When velvet begins to molt, it is still alive, and the process of shedding is a little bloody. It has been suggested more recently that at molting time the velvet in some way irritates the deer, and that this causes their characteristic rubbing of their antlers against natural objects such as small trees or low limbs of larger trees to help remove the velvet.

When the velvet is completely molted, the familiar rack of sharp-pointed, smooth antlers is exposed—ready for battle in the world of rutting bucks. That seems to be the main purpose of antlers. Again, natural selection plays a role here, as bucks with larger racks may benefit by winning the battles for mating rights with the herd's does.

Each year, mature bucks tend to grow antlers which have the same number of tines and the same beam lengths as in their younger years—other factors remaining the same—but their racks may grow considerably thicker. Thus, a well-developed, thick and sturdy rack is most often found on a buck in his prime. As bucks age beyond their prime years, antler thickness and overall size often decreases.

Studies by field biologists have shown that one factor dominates antler development, where the other factors of genetics and physiology are equal. The amount of available calcium and phosphorus compounds in the dominant soils of an area is associated with how well-developed the antlers of deer living in that area tend to be.

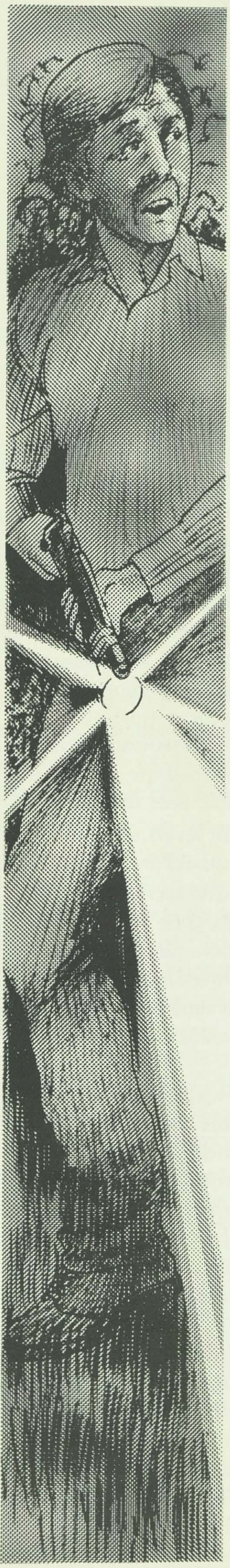
Some Florida soils lack significant levels of calcium or phosphorus compounds, while others are overly abundant with them. These soil-borne compounds are initially absorbed by growing plants, then ingested by deer when they feed on the plants. No matter what a buck's genetic potential is, or how high his hormone level runs, without these important minerals, bone and antler tissue will be malnourished and cannot reach their potential full size.

The original source of most of Florida's natural soil calcium and phosphorus includes the remains of shells from trillions of crustaceans and shellfish which lived in the ocean long before the sandy peninsula formed. Shrimp, scallops, conchs, clams, lobsters—even fishes with their bony skeletons—and other sea animals grew mineral-laden skeletons or shells, then died, piled up and decomposed. These remains now form part of the complex mixture called soil.

From these still-existing original compounds, trillions of root hairs on billions of plants absorb the calcium and phosphorus compounds that may be used to grow antler tissue. There, on a buck's head, these compounds stay in the antlers until they are shed. Once shed, they may slowly dissolve back into the soil, providing compounds which feed more plants, and the process continues. ☐

Wildlife Alert's First Five Years

By Scott Ball



One midnight on a hot summer's eve in the woods of northwest Florida, there wasn't a wildlife officer within miles. Surely, thought the poacher, he could get away with the crime he was about to commit. He switched on a battery-powered spotlight strapped across his forehead. A beam of light pierced the darkness as he scanned the area—first to the left, then to the right—until a pair of greenish-yellow eyes reflected back at him. A white-tailed deer stood frozen by the light. The outlaw raised his rifle, aimed and fired. The deer dropped to the ground.

As it turned out, the man was right in one thought that night, but wrong in another. True, there was no wildlife officer present to arrest him on the scene, but he was not about to get away. He hadn't counted on Wildlife Alert.

A nearby resident, awakened that night by the sound of gunfire, had emerged from his house in time to write down the license plate number of a suspicious-looking vehicle leaving the woods. He called the Game and Fresh Water Fish Commission's toll-free Wildlife Alert telephone number, and as a result of the information provided by this alert citizen, the game thief was brought to justice. In turn, the caller received a $200 cash reward.

This crime, and hundreds of others, might have gone unsolved or even undetected without the cooperation of concerned citizens' participation in the Wildlife Alert program.

Wildlife Alert is now five years old and, without a doubt, is one of the most successful programs ever initiated to aid in the enforcement of Florida's wildlife and freshwater fish laws.

In 1979, Wildlife Alert, patterned after a similar program in New Mexico, was initiated by the Commission. Citizens who witness a wildlife law violation are encouraged to report it. If the information results in an arrest, the caller is eligible for a cash reward. If the case involves an endangered species, a conviction is required before a reward can be paid, but in either case, the caller is not required to give his or her name and will not have to appear in court.

While day-to-day administrative matters of Wildlife Alert are handled by the Commission, the program as a whole is overseen by the Wildlife Alert Reward Association. These 13 citizens are appointed by the Commission's executive director and receive no pay for their work. It is their job to review cases and approve rewards to be paid.

The reward money comes from a fund made up entirely of private contributions. These contributions come from hunting clubs, fishing clubs, local conservation groups, garden clubs, individuals and even from the violators themselves. That's right! Many judges have ordered convicted violators to contribute money to the reward fund as part of their sentences.

Just how successful has Wildlife Alert been to wildlife law enforcement? In a word, tremendously. In only five years, more than 3,200 arrests have been directly attributed to Wildlife Alert. Without the cooperation of responsible citizens who report violations and other suspicious activities, many of these arrests might never have been made. Even though Florida has 219 wildlife officers working for the Commission, they have more than 35 million acres of fields, woodlands and waters to patrol in Florida.

Although the Wildlife Alert Reward Association has paid over $70,000 in rewards to those who were willing to get involved, 60 percent of those who were eligible for a reward said, "No thanks." They were more concerned with putting violators out of business than in collecting any reward.

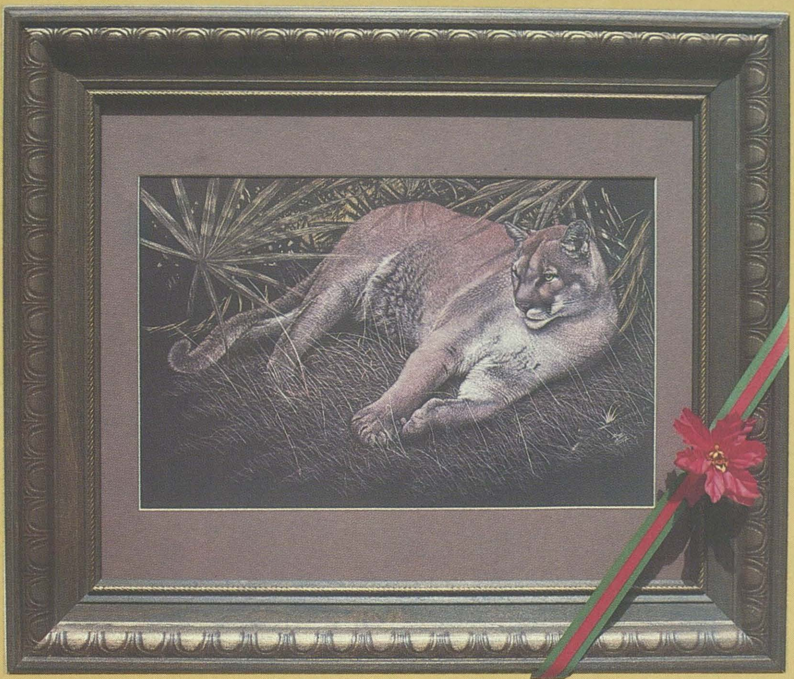
Some interesting cases have been made during the Wildlife Alert's first five years. A 1982 Division of Law Enforcement report tells of a call that resulted in a highly successful undercover investigation. In the end, four individuals were arrested on 19 counts of possession and sale of alligator skins and two counts of alligator killing. The Commission seized 146 alligator skins, a 1978 Ford four-wheel-drive pickup truck, an airboat and a trailer. The Wildlife Alert caller received a $1,000 reward.

Many calls have also resulted in rewards being paid through the Threatened and Endangered Species Reward Trust Fund, which was set up in the late 1970s by the Florida Legislature. One caller told of two men who were cutting down a tree in which an eagle's nest had been built. A property owner had ordered his two employees to cut down the tree because he planned to develop the property. All three were convicted and sentenced to a total of $1,600 in fines, three years of probation and 240 hours of community service work. The caller was paid a $500 reward.

Another caller saw someone throw a beer bottle at a brown pelican. The pelican was struck, fell into the water and drowned. The witness reported the violator's boat registration number, and he was caught, tried, convicted and fined $100. A $200 reward went to that Wildlife Alert caller.

Not all Wildlife Alert cases are as unusual as these, but all are important. The people who participate in the Wildlife Alert program are standing up for the great majority of ethical hunters, anglers and other outdoor enthusiasts who practice good sportsmanship and respect Florida's wildlife laws. In effect, they are telling the others, "We don't like your giving the rest of us a black eye and now we're doing something about it."

If past records are any indication of the future, Wildlife Alert will continue to succeed in thwarting wildlife law violators, so happy fifth anniversary Wildlife Alert! Here's wishing you many happy returns! ☐



Overall Size: 17″H x 25″W. Image Size: 11½″H x 17″W. Frame not included.

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As soon as we made the offer for a FREE 17x25-inch print of our July-August cover art, FLORIDA WILDLIFE readers from all over the country responded! The chance to own a quality reproduction of a work of art by one of Florida's most outstanding wildlife artists was a chance hundreds of readers didn't want to miss.

When artist Gregg Murray produced his original scratchboard rendition of Florida's state animal, the endangered Florida panther, he produced one of the most beautiful and accurate portrayals of this magnificent North American cat ever completed. The detail of his art is splendid, and these fine prints capture each tiny line of the original work in exact detail.

We knew this offer would be popular with our readers, so we printed enough to be sure everyone who wants one has a chance to order one. With the traditional gift-giving season just around the corner, you still have time to give one-year FLORIDA WILDLIFE subscriptions to three of your friends, for the regular cost of $7 each (only $21 total), and we will give you the print FREE!

To make it easy for you to order now, while we still have numbered prints personally signed by Murray, we have provided the coupon form below. If you don't want to cut the page, we'll accept a photocopy or a legible (typed or hand-printed) form of your own that gives the same ordering information. Please be sure to include ZIP codes, and don't forget to include your mailing address.

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NEST BOXES for WOOD DUCKS

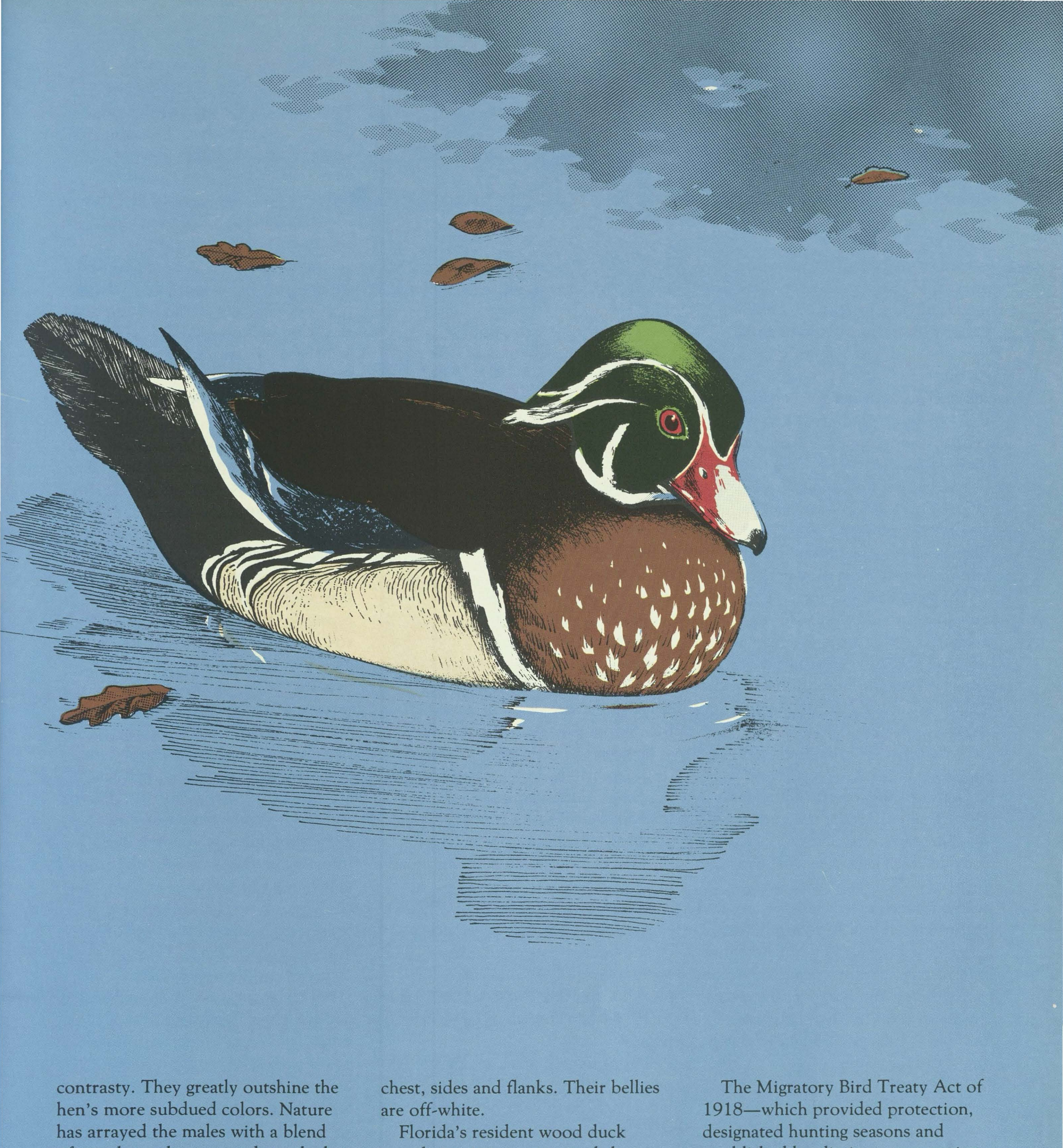
By Steven K. Stafford and Charles L. McKelvy

Almost anyone in Florida who spends time with nature during early morning or at dusk has heard the loud, squealing *wee-e-e-ek...wee-e-e-ek* of wood duck hens as they dart through wooded swamps. That sound is why many outdoorsmen call wood ducks "squealers."

Woodies' aerial acrobatics of twisting and turning through timbered wetlands, and their preference for wooded lakes and ponds, sets them apart from many other waterfowl species. Those wooded swamp havens provide nesting, roosting and feeding grounds; hence the name "wood duck" for this beautiful bird.

The wood duck (*Aix sponsa*) is classified as a "perching duck," as compared to "diving ducks and puddle ducks." The woodies, along with Florida ducks and fulvous whistling ducks, are the only three truly wild ducks that occur year-round in Florida. The importance of the wood duck to Southern hunters and birders is evident. It ranks first among waterfowl harvested in the South Atlantic states. During Florida's three five-day special September duck seasons between 1981 and 1983, wood ducks comprised an average of 42 percent of the total duck harvest, reports waterfowl biologist Frank Montalbano. Most of these were Florida homegrown birds, not northern migrants.

Woodies have remarkable plumage. Both males and females have crested heads which bob up and down in flight. The drakes's colors are brilliantly vivid and



contrasty. They greatly outshine the hen's more subdued colors. Nature has arrayed the males with a blend of purples and greens and streaked their heads with white. Red, yellow, white and black color their bills. They have white chins and throats, red eyes, burgundy flecked with white on their chests, bronze flanks and purplish-black backs and tails.

Hen wood ducks are more colorful than most other hen ducks. They have a pronounced white ring around each eye; a white chin and throat; and a gray-brown back, chest, sides and flanks. Their bellies are off-white.

Florida's resident wood duck population is in pretty good shape today, but there have been times when the entire continental United States' population was low. The early 1900s was a period of wood duck poverty throughout their range. Over-hunting, especially in the Northern states, and excessive logging activities in coastal swamps and hardwood bottomlands of the Southeastern United States were the main culprits.

The Migratory Bird Treaty Act of 1918—which provided protection, designated hunting seasons and established bag limits—was a major factor in the wood duck's recovery. Also, cutover bottomlands and swamps have recovered in many areas, and that also helped.

Still, habitat is being depleted in many other areas. Drainage and clearing of wetlands, especially swamps and hardwood bottoms to make room for development, are major present threats to wood duck habitat. ▷

The greatest concentrations of wood ducks in Florida occur in the northern part of the state. Here, extensive acreage of public and private woodlands and timberlands interspersed with rivers and streams provide habitat which meets wood ducks' seasonal needs.

Habitat management for wood ducks in Florida is, in part, directed toward providing suitable breeding, nesting and brood-rearing habitat. Wood ducks nest naturally in tree cavities which are fairly close to a stable body of water, and artificial nest boxes are readily utilized if properly constructed and erected in the right places.

The Florida Game and Fresh Water Fish Commission has placed numerous nesting boxes around Florida lakes, streams and rivers, and many private landowners and waterfowlers are putting up their own boxes to aid the cause. These artificial nesting structures can increase nesting opportunities for woodies and partially offset some of the local losses of natural nesting sites.

Division of Wildlife personnel recently conducted a nest box utilization study on three northeast Florida lakes. Besides the authors, division employees Dick Couch, Art Stockle and Truby Lee worked on the study. The objectives were to: find out when nesting begins; note the average clutch size (number of eggs per nest); calculate the hatching rate; determine the type and amount of predation and compare the use of boxes on lakes having many natural cavities to their use on lakes having few natural cavities.

Information gathered during the study yielded some valuable insight into the use of manmade nest boxes.

The three study lakes ranged in size from 420 to 921 acres, and are typical north Florida flatwoods lakes in the Suwannee River watershed. Water is tannin-stained, acidic and low in minerals and nutrients. Shoreline vegetation primarily consists of thick woody shrubs. Cypress trees of various sizes rim the lakes and grow for considerable distances from the shoreline. Mature cypress trees provide most of the natural nesting cavities around these lakes. One lake has numerous cavity trees, but the other two do not.

In the early 1970s, wooden nest boxes were placed on mature cypress trees growing around the lakes. Nest box sites were selected in areas which had stable water depths of at least three feet and where suitable brood-rearing habitat was close by. The heights of boxes above the water varied from 10 to 15 feet.

Prior to nesting season, wood shavings were placed in the bottom of each box to provide nest material. Boxes were inspected weekly from early-January through mid-June to evaluate nesting activity. Despite fears that hens would abandon their nests because of the weekly disturbances during inspections, not a single hen abandoned a nest due to human interference. In fact, during incubation, hens were easily caught, banded and placed back on their egg clutches, hardly skipping a beat in the nesting process.

Nesting activity occurred in fairly distinct periods. Box preparation for egg laying, which consisted of rearranging the wood shavings into inverted, cone-shaped piles, began as early as January 18 and continued in some boxes through mid-June. The degree of nesting activity (initiation of nesting) by monthly periods was as follows: January 18 to February 24, 48 percent; March 1 to 30, 19 percent; April 5 to 30, 24 percent; May 1 to 15, 9 percent.

It appears that an early peak nesting period occurs from mid-January through February and a later peak occurs from early-April through mid-May. Two of the early nesting hens had been banded the previous year. Other researchers have said older females may tend to nest earlier than first-year hens. Some nesting probably occurs at least as late as the end of June.

Use of nest boxes was relatively high. A total of 15 out of the 19 boxes inspected (79 percent) was used, and 23 nesting attempts were made in those 15 boxes during the course of the study. That means some boxes were used by different hens at different times. In some ways, it seemed almost like females were waiting in line to have their turn at a nest box. Nineteen of the 23 nesting hens (83 percent) had successful hatches.

Clutch sizes ranged from seven to 21 eggs, with an average of 13.3 eggs per nest. On the average, two eggs in each clutch did not hatch. "Dump nests" (where two hens simultaneously laid in the same nest), occurred in four instances and averaged 18 eggs each. Each dump nest was incubated and the hatching success was comparable to normal nests. Egg infertility or dead embryos were the causes of individual egg failures.

One of the primary reasons for nest failure in wood ducks is predation by other wildlife. This is especially true with artificial nest structures that are not supplied with predator-proofing devices. The main predator of wood duck nests, raccoons, was not a problem in this study, but four nests were destroyed by yellow rat snakes. Even nest sites out over the water away from land are subject to some predation, but to a lesser degree than nest sites along shorelines or in the woods. Initially, another lake with shoreline nest boxes was included in the study, but several inspections of those nest boxes revealed almost 100 percent utilization by gray squirrels and flying squirrels.

All boxes on the two lakes which had few natural cavities were utilized; whereas 44 percent of the boxes were used on the lake which had numerous natural cavities. Also, 60 percent of the boxes placed around the lakes which had few cavities were used twice (by different hens) during the study period. This study demonstrates that placing manmade nest boxes around lakes which lack sufficient numbers of suitable cavities can definitely enhance wood duck breeding populations, provided other habitat conditions are adequate.

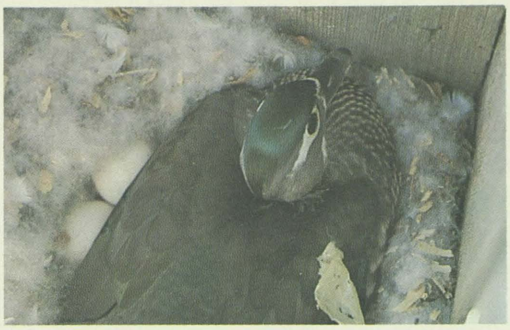
The annual clearing out of old litter and replacement of it with new wood shavings is an accepted maintenance program. Those boxes which were thus cleaned and rejuvenated with new wood shavings were used more than uncleaned boxes. Old sawdust or wood shavings often harbor molds and insects which make boxes unattractive to picky hens. Wood shavings are better as box litter than sawdust, because shavings don't compact or hold moisture as does sawdust.

Hatchling survival depends greatly on the quality of the adjacent brood cover. Good brood cover is characterized by overhanging woody shrubs and emergent herbaceous aquatic plants which provide insect foods and cover. Although our study did not follow up on broods, it is generally believed that at least half the ducklings do not survive to the 10-week-old flying stage. Again, natural predation takes its toll. This is nature's way of regulating population numbers. By late summer, juvenile birds are adept at flying and they soon gather with other birds and begin to move away from their former areas.

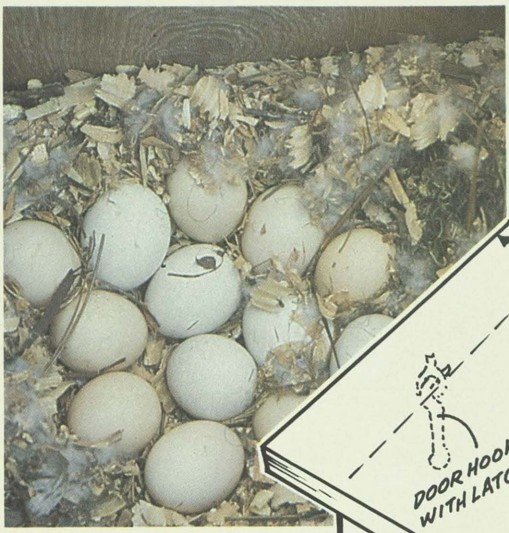
It cannot be overemphasized that reasonable care must be taken in the construction and placement of wood duck nesting boxes. Once erected, an annual maintenance program is a must. At lake sites, situating boxes on trees or posts away from the shoreline will significantly reduce predation.

Along rivers and streams, where boxes cannot be placed on structures in the water, a conical, sheet metal predator shield should definitely be placed around the support post below the box to reduce squirrel and raccoon problems. On land, trees should not be used for box supports. Simply attaching the nest structure to a tree invites snakes and raccoons to dine and squirrels to nest.

You might know of a favorite pond or stream which has potential to be a home for woodies. If so, it's not too early now to place wood duck nest boxes. Hens will be searching for next spring's nest sites as early as January, so why not get started this week? □



Steve Stafford-Photograph



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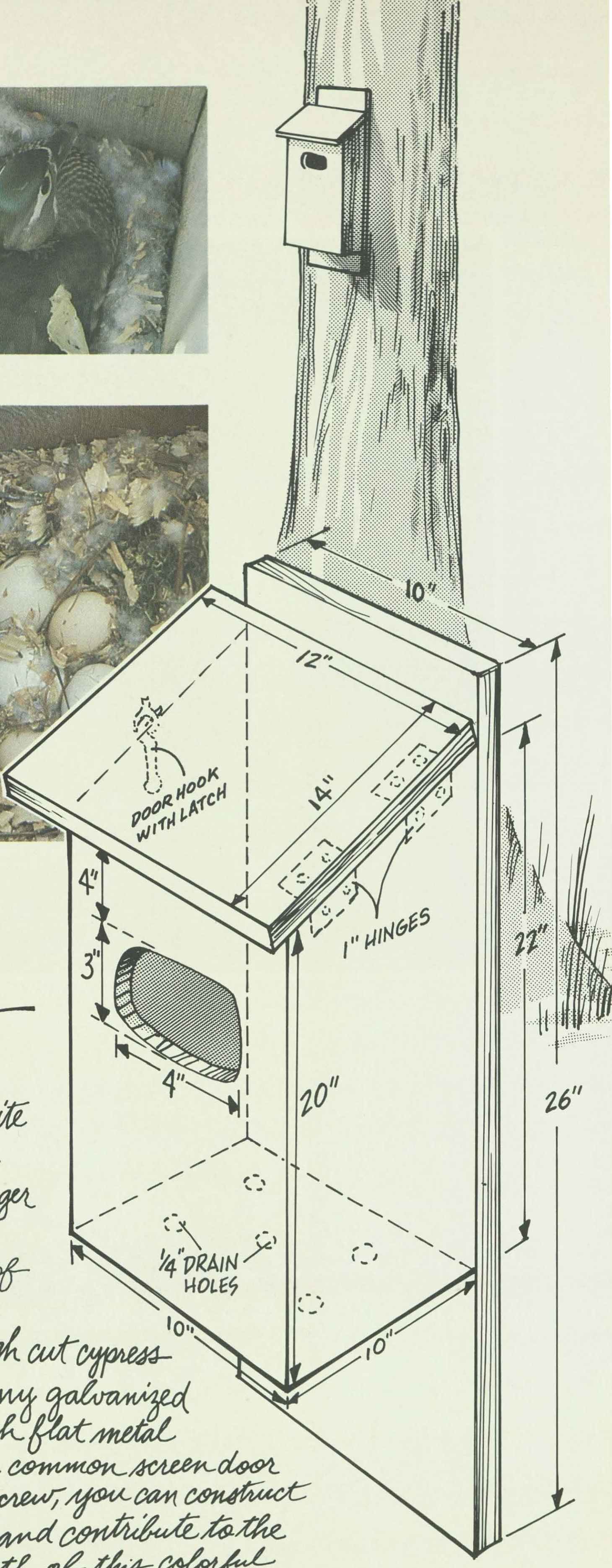
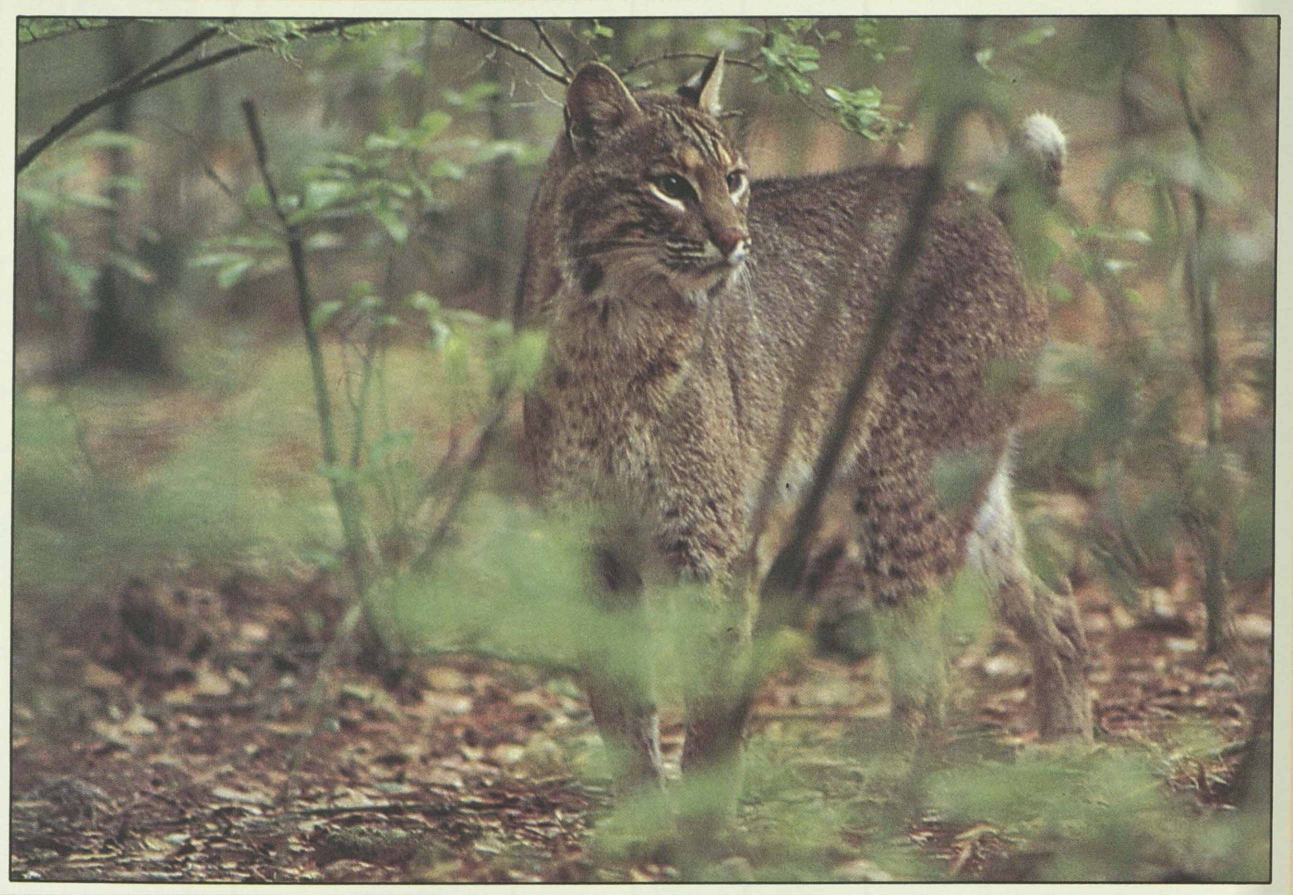


Wood Duck Nest Box

Choose a nest site over the water to lessen the danger of predation, a primary cause of nest failure.

Using 3/4" rough cut cypress and 8 or 10 penny galvanized nails, 2 one inch flat metal hinges, and one common screen door hook and eye screw, you can construct this nest box and contribute to the continued growth of this colorful species.

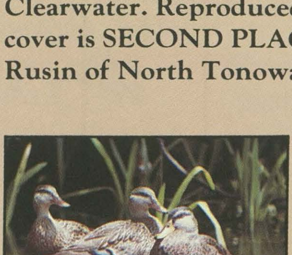
Note the wood duck hen, in the top photo, distinguished from the male by more subdued colors and the wide white eye ring.

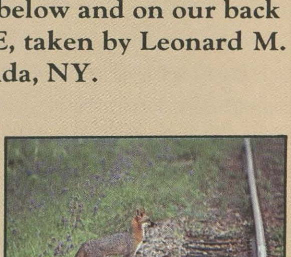


THIRD PLACE, Luis H. Izquierdo, Miami

FLORIDA WILDLIFE'S Hunting category photo contest winners

FIRST PLACE, reproduced below and on our front cover this issue, was taken by Ed Frye of Clearwater. Reproduced below and on our back cover is SECOND PLACE, taken by Leonard M. Rusin of North Tonowanda, NY.



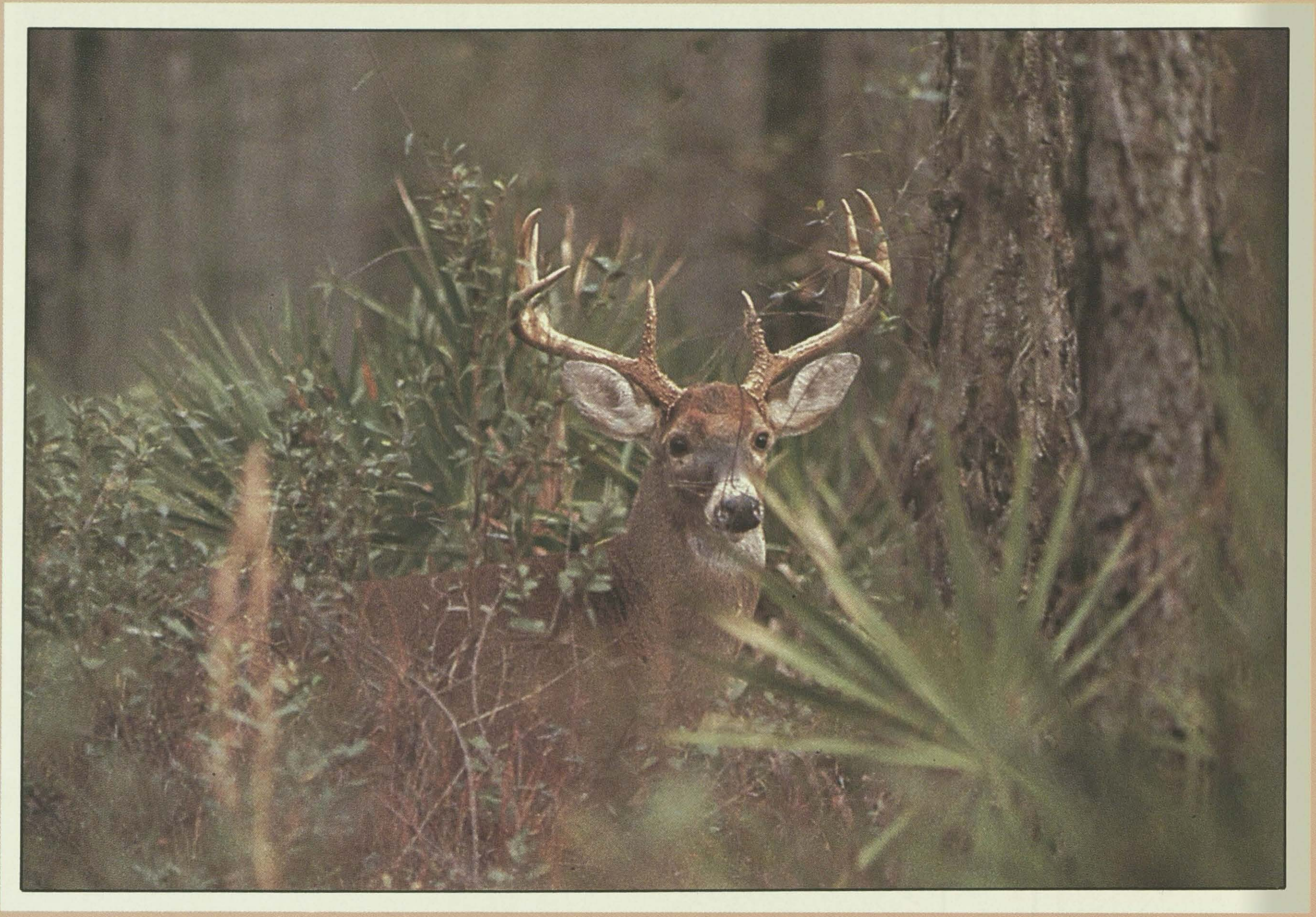


HONORABLE MENTION, William E.C. Marvin, Tallahassee

It was last weekend when I first blundered into that buck. I had rounded the bend of this old overgrown lumbering road and there he was. We just stood there staring at each other.

After what seemed like eternity, he stepped off into the woods, slowly at first, then he gracefully bounded over the low bushes and vanished amid the crisp crunches of hoofs on dry leaves.

I didn't have my camera with me then, but I did yesterday. I've gone back to that spot three times since first seeing him, hoping to capture that buck on film. I've waited patiently for hours, hoping the trail I was watching was part of his regular territory. My legs ached. Same with my back. A glance at my watch told me I'd been there two hours and 45 minutes, and I had only one hour of good sunlight left. ▷



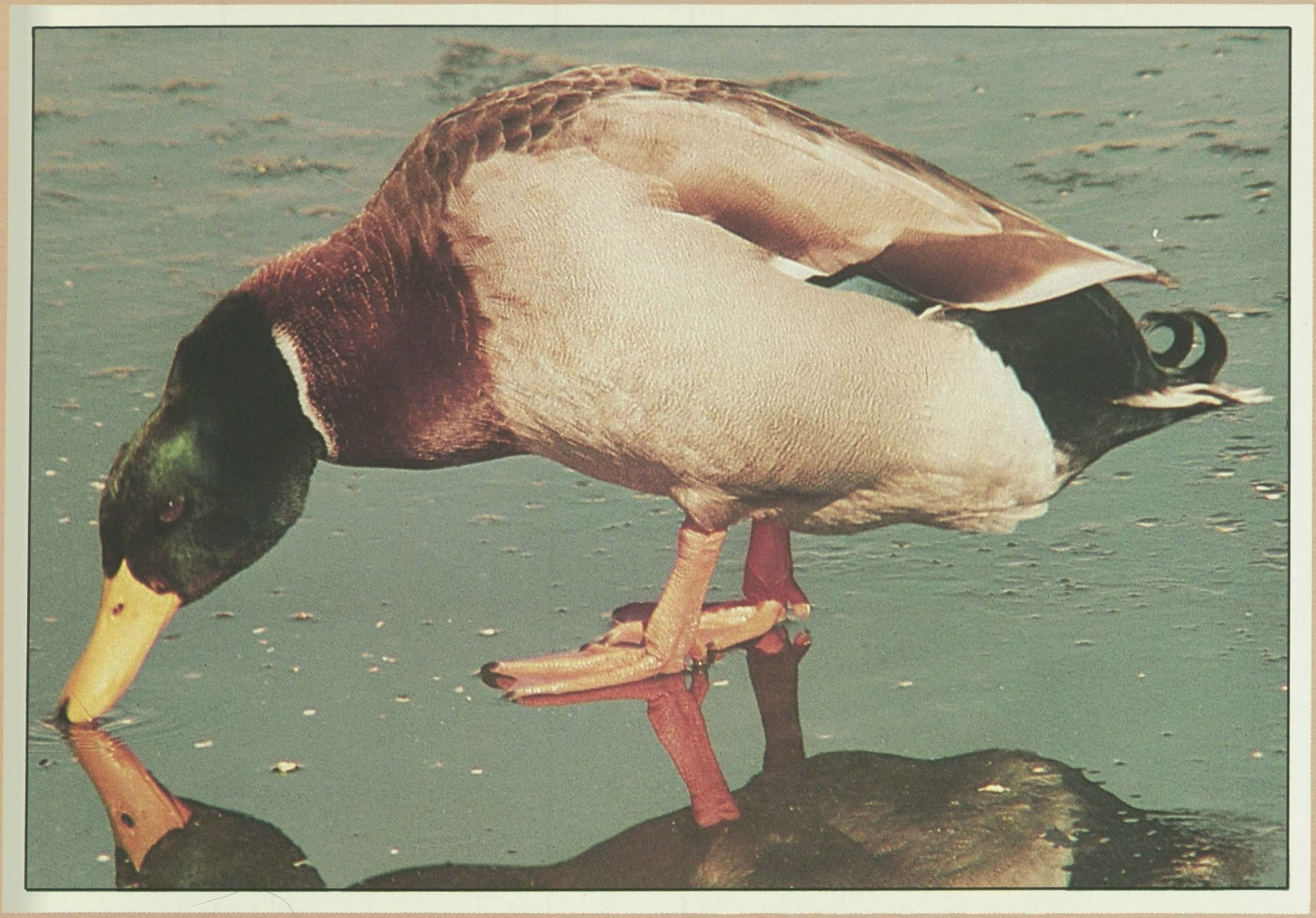
HONORABLE MENTION, Brian Proctor, Tallahassee

I wondered, should I stay there or move to another spot? At least I could get up and stretch. Suddenly, I heard a noise off to the right. All my concentration focused on listening as the light crunching of dry leaves grew louder. Carefully, I aimed the camera in that direction, resting my shoulder against the trunk of the pine tree for stability.

There he was!

I took two quick photographs before he reacted to the clicks. He stopped dead in his tracks, obscured by a tangle of vines and spindly pine trees, then he proceeded cautiously, his ears scanning all around.

Thinking I could get a third shot, I stood up, but moved too quickly, making a scraping sound against the tree. The buck's primed body sprang in reaction. He was gone before I



HONORABLE MENTION, Marvin Croy, Charlotte, NC

could even level the camera to focus.

When my processed slides were returned, one was out of focus, the other was well-focused but underexposed.

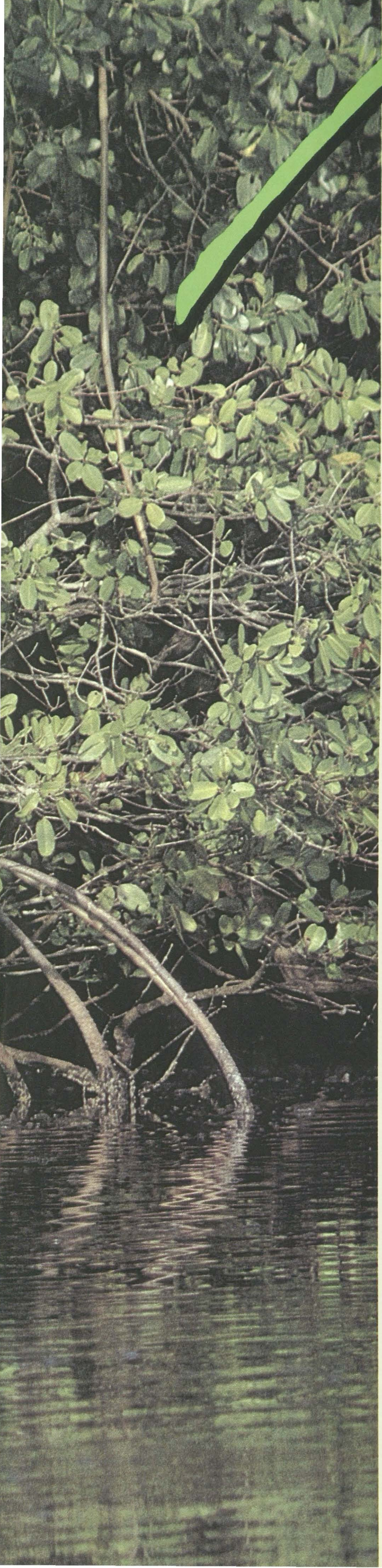
I'll go back next week to try again.

Game photography takes all the skills and instincts of hunting and, in many ways, equals the triumphs and disappointments. Trying to photograph the larger game is even more difficult, because deer, cats, foxes and others are so timid, cunning, elusive, or worse for photography, nocturnal. The photographs on these pages are examples of the triumphs our 1984 game photography contest winners had hunting with their cameras. ☐

—John Roberge

An aerial view shows some of the Ten Thousand Islands.

A hermit crab pulls its salvaged shell wherever it goes.



Mangroves

Text and Photographs
By Lynn M. Stone

A bumper sticker on a Ford pickup in Sarasota was emblazoned "Support Your Local Mangroves." Sage advice, that bumper sticker, because Florida's mangrove trees are in many ways responsible for south Florida's abundance of fish and wildlife.

Bushy red mangroves (*Rhizophora mangle*) and their ecological kin, white mangroves (*Laguncularia racemosa*) and black mangroves (*Avicennia germinans*) are unusual, for unlike most terrestrial plants, they are salt-tolerant. The most salt-tolerant mangrove, the red mangrove, is also the most important to south Florida's coastal ecosystem. Approximately 90 percent of commercial fish species and 75 percent of gamefish species—including bonefish, gray snapper, permit, redfish, snook, tarpon and seatrout—are linked to mangrove food chains.

For years, as the pitchmen for America's "subtropical wonderland" ballyhooed the virtues of endless sunshine and shining seas (all affordable and within your grasp!), south Florida became a mecca for shivering pilgrims from the North. Among the casualties of the development which followed were thousands of acres of bay bottoms and mangrove forests. Finally, early in the 1970s, the ecological value of red mangroves became a matter of fact and their wholesale destruction eased.

Researchers William Odum and Eric Heald of the University of Miami concluded that the annual leaf fall of red mangroves is more than three metric tons per acre at the North River estuary in Everglades National Park. In other words, each acre of red mangroves feeds the ecosystem three metric tons of basic food material. This material, said these scientists, is the energy base for an extensive and complex food web. Beyond a doubt, the mangroves are a critical component of the ecosystem.

Most of the animals which prosper from the mangroves do not directly consume the leaves, twigs, bark and seedlings. The full energy potential of the trees is not reached until the mangrove material has been broken down by bacteria and fungi. Then the nutritional benefits work their way through the food chains.

Tiny invertebrates, which feed on microorganisms that cluster on mangrove particles, are devoured by larger animals. Eventually, energy stored in mangrove trees reaches predators at the top of the food chains: wading birds, crocodilians, raptors, large fish and other higher animals.

The red mangrove occupies a ▷

broad range through the tropics and subtropics of the world, but killing frosts restrict it in the United States to Florida's lower coasts. Red mangroves reach Volusia County along the Atlantic Coast and Levy County along the Gulf Coast, but the lushest stands extend from the Ten Thousand Islands of the southwest coast into Everglades National Park and throughout the Florida Keys.

Characterized by jumbled support roots, which hold the trunks of mature trees above most high tides, red mangroves are hardy and fast growing. And they grow in diverse habitats. They form scattered clumps and vast, wet forests. They line bays and rim shallow lagoons where salt concentrations exceed 36 parts per 1000—the salinity of Florida sea water. They form islands and fringe estuaries, the richest of the mangrove environments. Some have threaded along river courses into brackish swamps.

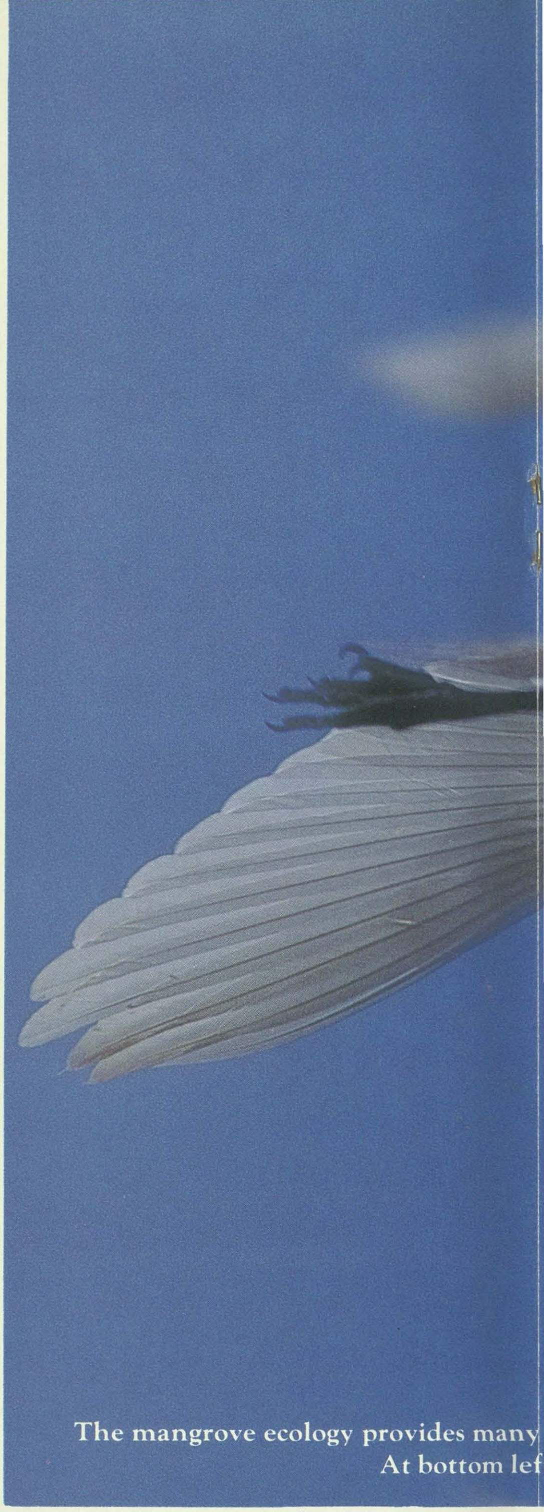
Everywhere they grow, mangroves reproduce efficiently. A mature tree produces dozens of green, panatella-shaped seedlings which germinate on the branches. Some of the seedlings root where they fall, gradually increasing the size of the colony; others float away on currents. Sooner or later, often many miles from the parent tree, seedlings may beach and take root, beginning a new colony. By their third year, trees begin to develop the distinctive support roots which transport nutrients and oxygen to the trunk and the ground roots. The lattice of gnarled, intertwined support roots also anchor sediments and help accumulate soil by trapping silt, shell fragments and organic debris. As the colony and its network of roots expands, the accumulation of debris grows. If hurricanes, storm tides and the whimsy of currents do not interfere, new land may gradually rise beneath the oldest mangroves and form new islands. Red mangroves may be succeeded by other less salt-tolerant plants if the ground rises sufficiently above the high tide level.

If plant succession occurs, the black mangrove typically arrives first, and white mangroves soon follow. Eventually, buttonwood establishes itself and slowly crowds out the most landward mangroves. Ultimately, what begins as a low, sodden forest of mangroves may become a comparatively high community of sabal palms and hardwoods, leaving only the shoreline to the pioneering red mangroves.

Green mangrove forests look pleasant enough against a blue canvas of ocean and sky, but visitors beware! The beckoning mangrove islands are "bewitching." As Columbus noted on his first voyage to the New World, the mangroves were "so thick a cat couldn't get ashore."

The typical mangrove island's edge is a ribbon of mud pocked by scores of fiddler crabs, whose retreats to their burrows are signaled by the clatter of their claws. If you do make one of these islands a port of call, you will find your movement restricted by the support roots, branches and jelly-like peat.

Remarkably, Calusa Indians, whose culture depended on shellfish in pre-Columbian Florida, lived among the mangroves. The Calusas mysteriously vanished long ago. Perhaps, as some have humorously suggested, they were "carried off by mosquitoes." In any event, Calusa shell middens are scattered throughout the mangrove isles of southwest Florida. Overgrown by West Indian plants, the middens, like the islands themselves, are rarely visited by man. Stillness prevails, interrupted now and then by bird chatter and the shell-on-bark scratching of crabs. ▷



The mangrove ecology provides many
At bottom lef

species of birds with nesting habitat. Above, a great egret flies over the densely growing mangroves, below center.
t, are two juvenile great blue herons, and at the bottom right, are two juvenile great egrets.

The most comfortable way to see mangroves is by canoe, boardwalk or trail. Everglades National Park has several canoe trails through the mangroves and a boardwalk snakes through a mangrove tract at West Bay. J.N. "Ding" Darling National Wildlife Refuge on Sanibel Island has marked canoe trails and an earthen road through a mangrove swamp. Walking trails in several state parks take visitors close to mangroves, too.

Despite its cussedness, mangrove swamps are worth close inspection. In addition to being basic food for coastal and estuarine ecosystems, mangroves provide roosts and nesting sites for many spectacular Florida birds. Each spring, a few select islands in Florida bays attract a crowd of nesting double-crested cormorants, brown pelicans, herons, egrets, wood storks and white ibises. Despite the chaos of territorial squabbles, punctuated by the croaks, grunts and rasps of young birds, the species coexist and raise new generations. Less conspicuously, the black-whiskered vireos, mangrove cuckoos, Florida prairie warblers and gray kingbirds also nest in the mangroves.

Many birds feed on exposed bay bottoms near the mangroves. At low tide, white ibises use their curved bills to probe the mud for crustaceans. Spoonbills use their mandibles to strain shallow water for tiny animals as they stride past motionless, great blue herons and American egrets which have staked out deeper pools. Shore birds, jabbing and plucking, bustle across the flats. Nearby, where dark submerged carpets of turtle grass hide blue crabs, sea urchins and snails, red-breasted mergansers plunge into quick silver minnows; and white pelicans, winter residents of the bays, encircle schools of fish. Overhead, ospreys scan the bay for seatrout.

With the exception of a few bird species, most large animals avoid mangrove forests or are merely passers-by. Even the so-called mangrove fox squirrel of south Florida prefers pines and cypress. Key deer, tiny white-tails of the lower Florida Keys, occasionally browse on mangrove leaves. Now and then otters, bobcats, marsh rabbits, opossums, corn snakes and mangrove water snakes turn up. Manatees sometimes roll by mangrove stands. Paddling your canoe unknowingly over a resting manatee can be a very unsettling experience for the manatee and you.

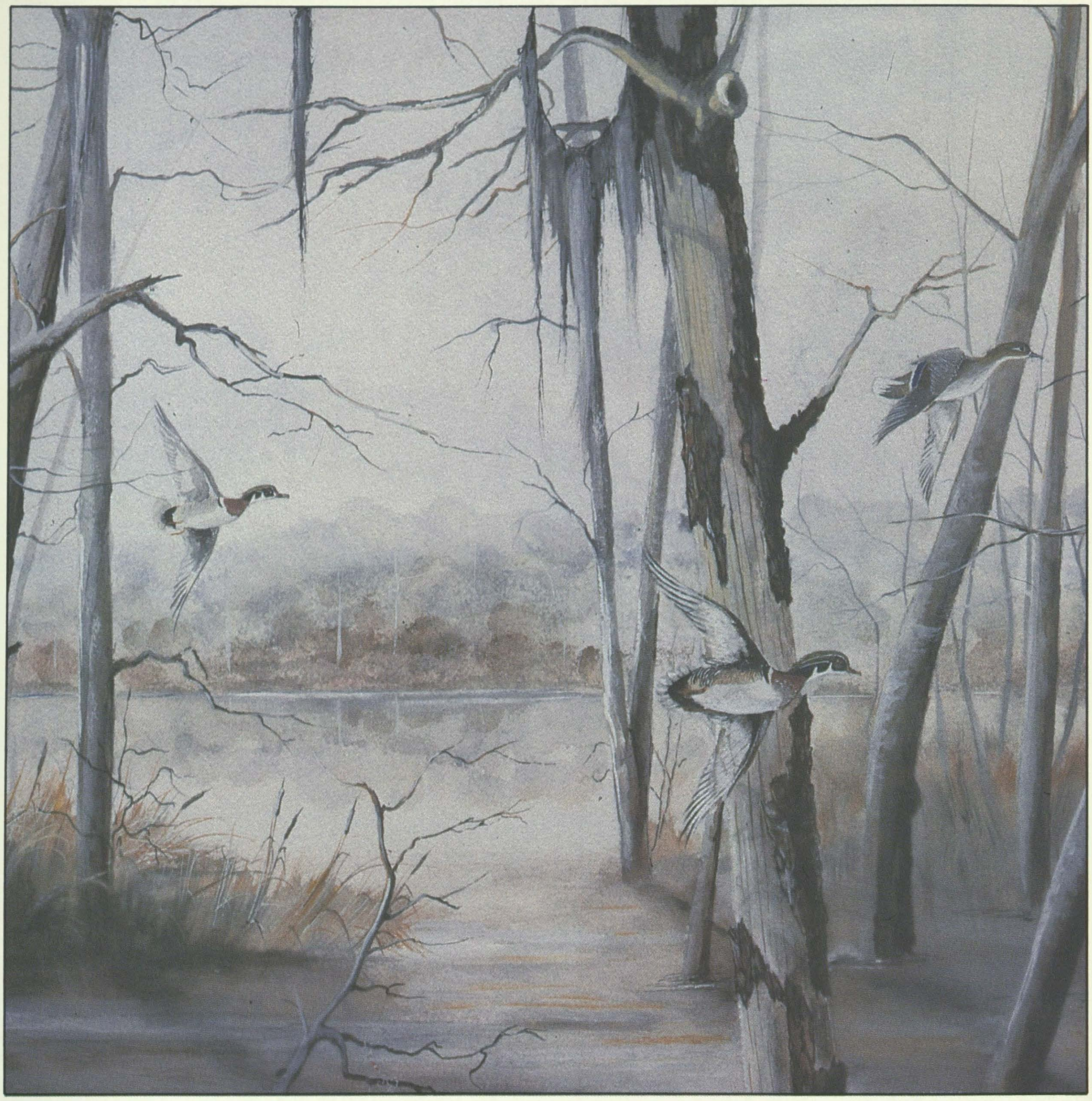
The only mammals that really thrive in mangroves are raccoons. Of course, raccoons can adapt to almost every Florida habitat. They are fine climbers and swimmers, and they often shuttle to mangrove islands far offshore. With a highly developed sense of touch, and a less-than-gourmet appetite, raccoons forage successfully where less-adaptive animals cannot.

Favorite morsels of raccoons include 'coon oysters, one of many types of invertebrates that colonize roots of red mangroves. Flooded daily by tides, their roots often bulge with clusters of barnacles, hydrozoans, tunicates, sponges, algae and even coral.

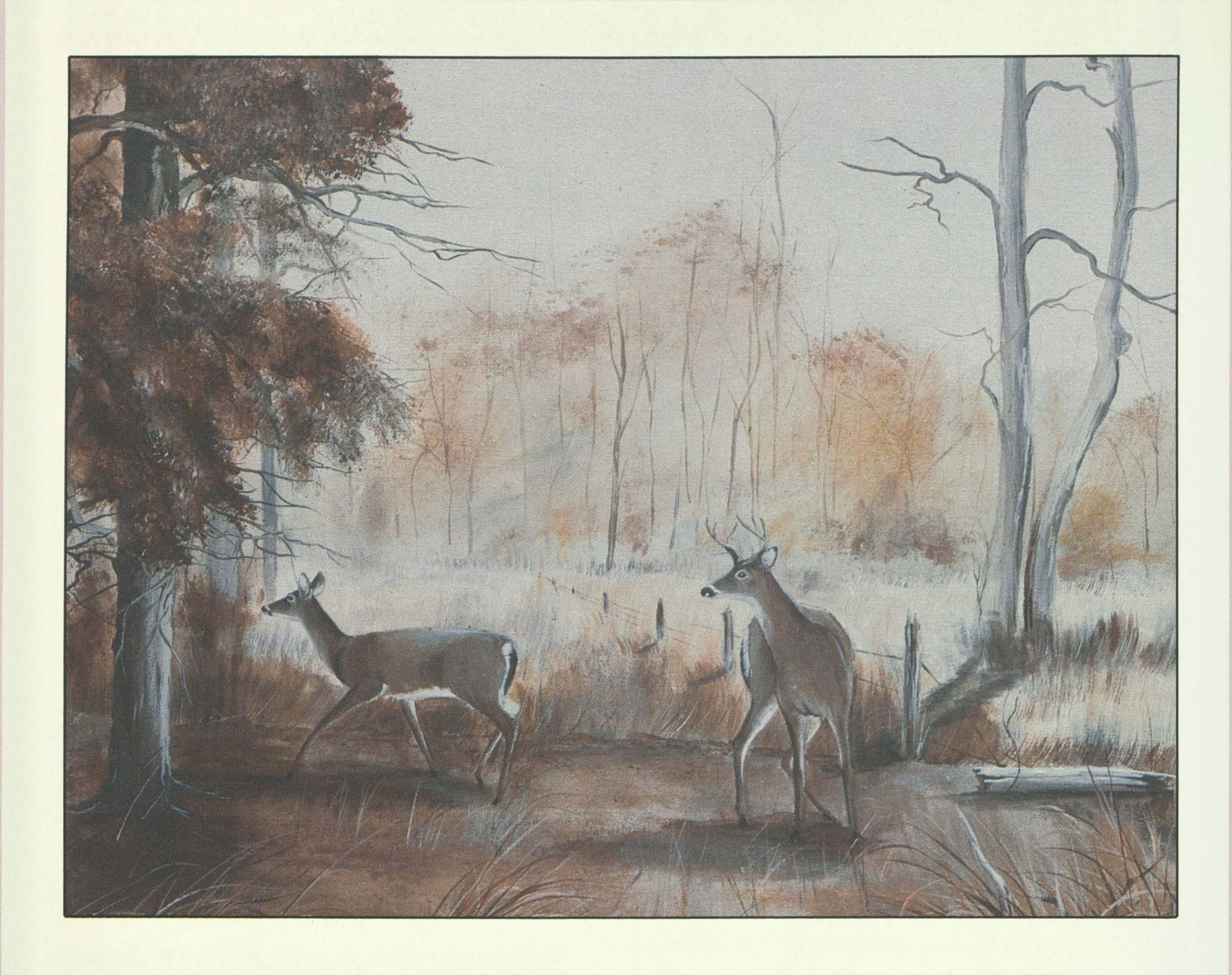
One of the least-known creatures of the mangrove community in south Florida is the endangered American crocodile. These reptiles have their last American stronghold in the mangrove-rimmed fingers and coves of Florida Bay. Like red mangroves, crocodiles are essentially tropical. They rarely stray north of Key Largo and Everglades National Park. The few remaining Florida crocodiles dine largely on fish and crabs.

American crocodiles inhabit only salt water or brackish water, but other crocodile species around the world inhabit fresh water.

As public awareness continues to grow, more interest is being shown in protecting the mangroves and the life forms which live in association with them. These valuable ecological systems can continue to be one of the state's most productive nurseries of life if they are maintained in a healthy state. □



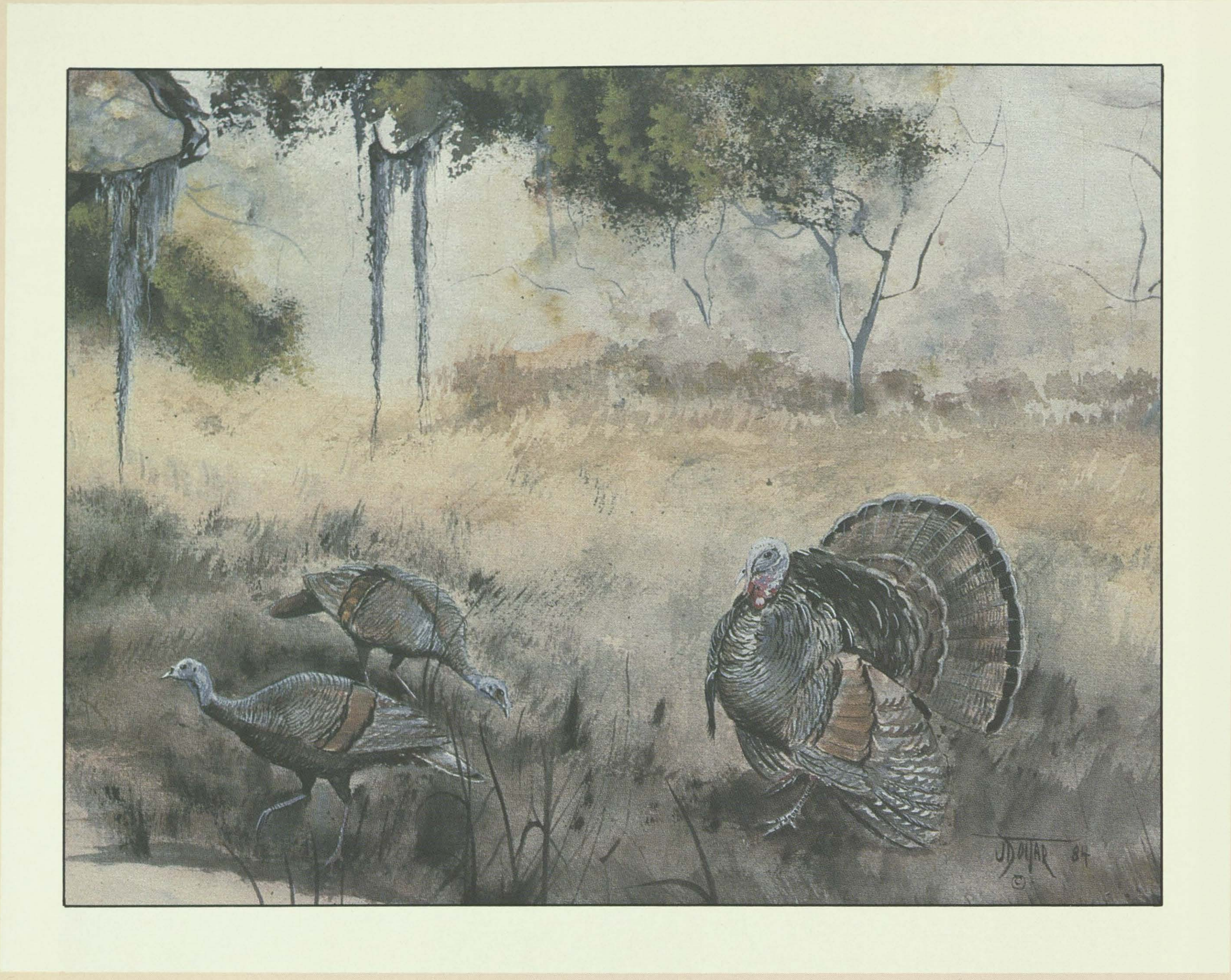
JIM DOLLAR



Many artists draw their inspiration from looking at photographs or the works of famous artists, but Tallàhassee's Jim Dollar gets his impressions from a life-long experience in the woods and fields of north Florida.

Born in Bainbridge, Georgia (1946), and raised in rural Leon County, Florida, Dollar says, "I've always loved to stay in the woods every chance I had, for most of my life. I grew up around hunting, fishing and the Florida outdoors." He started painting when he was nine years old.

"Now, I like to fish and hunt as much as ever, but I also enjoy the natural beauty of the things I see while on the water or in the field," he says. ▷

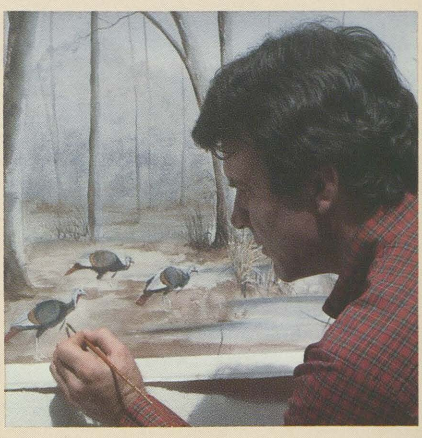


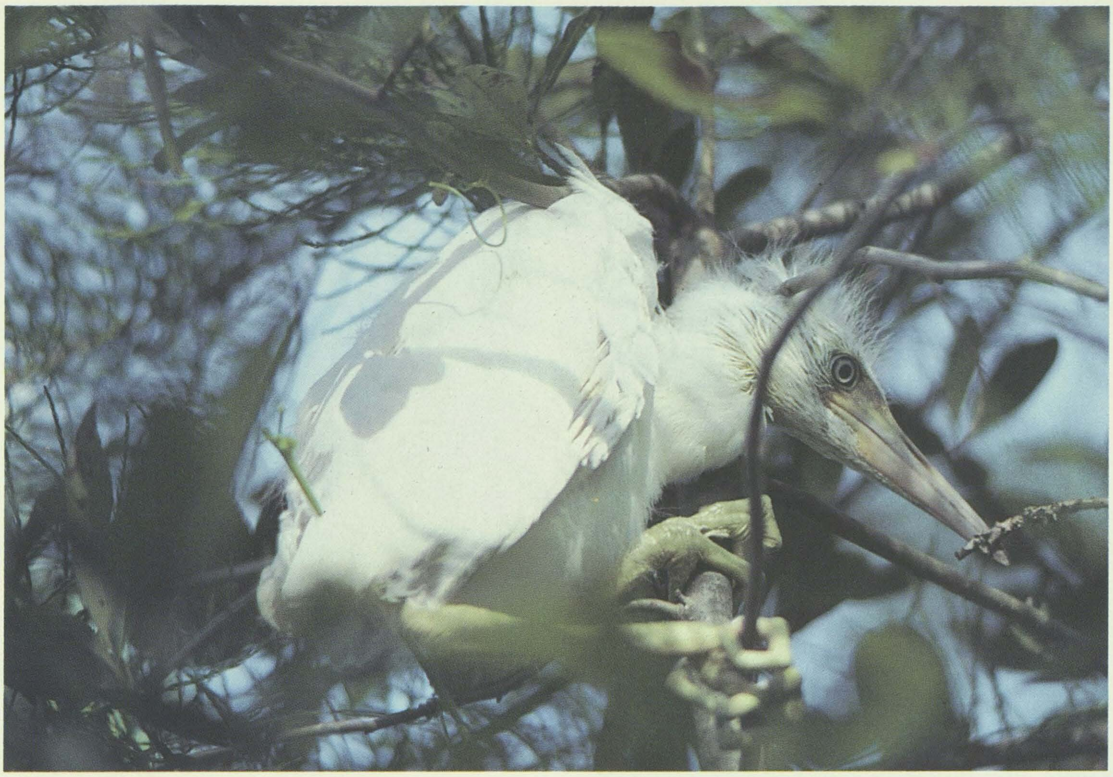
His most recent works have been in watercolor, a medium which Dollar says he is "more comfortable with," although he also has painted with acrylics and oils.

During his early adult life, Dollar was sidetracked by other things—service in the U.S. Marine Corps, attending community college, working and getting married and raising a family. Only recently has his life-long interest in painting been reactivated. His friends and family, who were familiar with his previous work, encouraged him to start painting again.

Although he spends his regular hours operating his commercial/residential carpeting business, he is spending more and more time pursuing his art. □

—John Waters Jr.



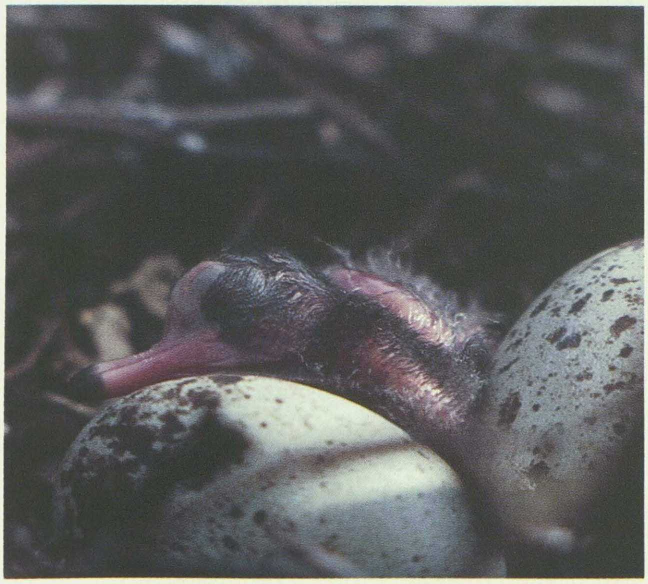


David Maehr-Photograph

Osceola Bird Colony

By David S. Maehr, Steven K. Stafford and H. Dick Couch

Division of Wildlife



David Maehr-Photograph

At the page top, a juvenile little blue heron tests its gripping reflex. Alligators wait below if it fails. Above, a newly hatched white ibis chick's still moist feathers dry in the swamp's filtered sunlight.

A walk through a Florida wading bird colony is a memorable experience. Seldom do wildlife biologists or bird lovers have the opportunity to observe large numbers of herons and ibises in their full breeding regalia, or anhingas as strikingly handsome nestlings.

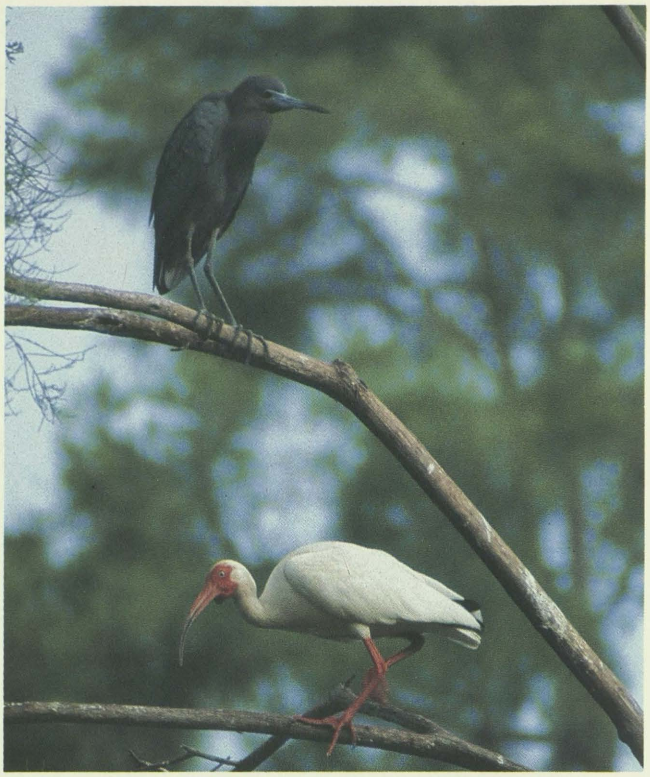
Nonetheless, most of us are familiar with these long-legged predators, which stealthfully stalk their prey or patiently wait for a tasty morsel to squirm or swim by. Bright red bills and legs immediately set the mature white ibises apart from the herons. Little blue herons are distinctive with their dark blue plumage and cobalt-blue bills. Great egrets develop showy *aigrettes* (long back feathers) and bright green skin around their eyes. Cattle egrets display deep red soft parts and a distinguishing buffy patch on the back.

The young of these colonial nesters are less frequently observed. Juvenile green herons perch frozen, bittern-like, showing a wispy crown of downy feathers. Anhingas appear elegant and nearly "unbirdlike" in their tight-knit juvenile plumage. Appearing more like pigeons than "Florida curlews," white ibis chicks are unusual with their black- and red-striped *straight* bills, black down and bright red skin.

Confusion arises in separating the white-plumaged chicks of cattle egrets, little blue herons and great egrets. Until fully fledged, these juvenile birds can only be separated by subtle differences in skin color and plumage. ▷

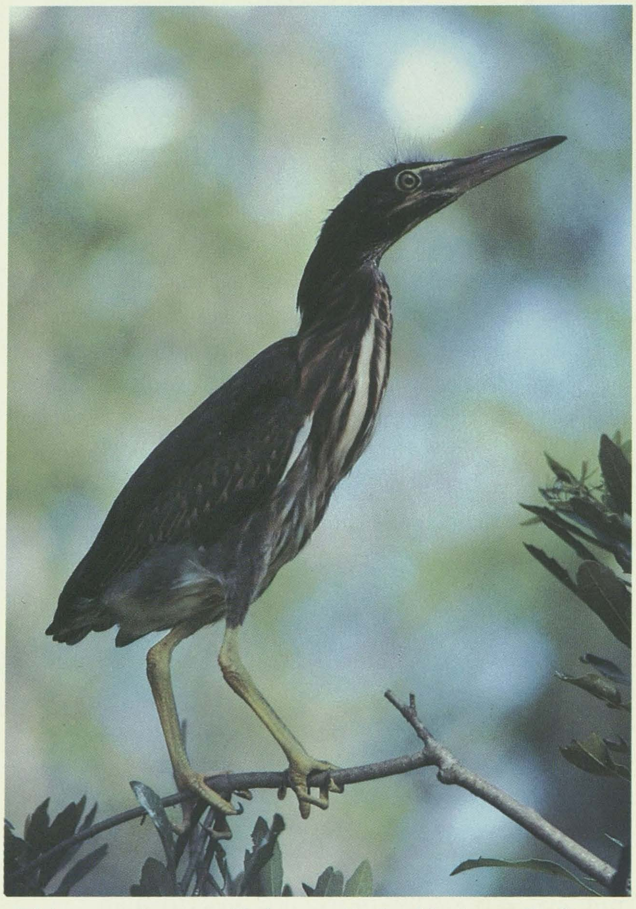
Dewey Weaver-Photograph

Blending into the nest of sticks, a baby green heron lies motionless.



Art Stockle-Photograph

The colony had several species nesting there.



David Maehr-Photograph

This green heron still shows a little of its juvenile down on top of its head.

Cattle egret nestlings have a black bill which slowly changes to yellow as the fledged birds mature. Young little blue herons can be distinguised from juvenile great egrets by the herons' lime-green flesh parts and dark pigmentation on the tips of their developing primary wing feathers. Little blues retain their white covering until their second year, when a rather harlequin appearance results from nonuniform blue feather development. Great egrets eventually outgrow their white-plumaged relatives, but while they are small, they have dark legs and a heavier, yellow bill.

Wading bird colonies are scattered throughout Florida, wherever adequate food and aquatic nesting habitat can be found. Often, the same area will be used from year to year, but many of these colonies tend to be ephemeral; here one year and gone the next. The colony where the accompanying photographs were taken is unique, however, in being the first discovered in the Osceola National Forest. Apparently, the vegetative density in areas like Big Gum Swamp has made previous searches for colonies unsuccessful. An increase in water levels this year may have created adequate nesting habitat there, while also increasing the food supply.

The 400-nest colony we visited was situated in a five-acre swamp scattered with bald cypress, swamp tupelo, fetterbush, wax myrtle, Virginia

Dewey Weaver-Photograph

These young great egrets are not yet old enough to fly, but soon, they will soar away to live mostly solitary lives as predators.

David Maehr-Photograph

Researchers examined and photographed many juvenile birds, including this little blue heron

sweetspire, greenbriar and ti-ti. Aquatic plants included duckweed, alligatorweed and water primrose. White ibises dominated the colony (33 percent), followed by great egrets (25 percent), cattle egrets (19 percent), little blue herons (10 percent), anhingas (8 percent), and green herons (5 percent).

In June of this year, 35 nests were randomly marked to include all species present. Once weekly, over a seven-week period, each nest was visited to record the number of eggs, nestlings, fledglings, mortality, and type of predation. These studies were made to determine colony viability and success.

By mid-July, 90 percent of the hatchling birds had fledged. The earliest nesters were white ibises, followed by anhingas, great egrets, little blue herons and green herons. Cattle egret nestlings were observed before monitoring and throughout the survey period. Predators, such as snakes and raccoons, destroyed 34 percent (12) of the nests. An average of two fledglings were produced by 66 percent of the nests.

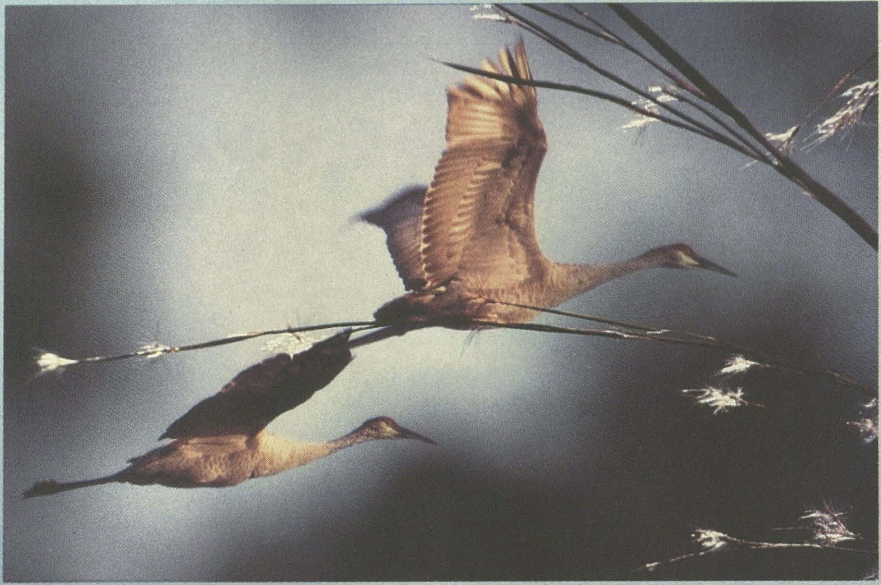
But, there's more excitement in a Florida heron colony for field biologists besides the birds themselves. There are always the challenges of staying dry, not panicking at waist-high encounters with water moccasins, and trying to regain your balance by grabbing a paper wasp-covered fetterbush branch.

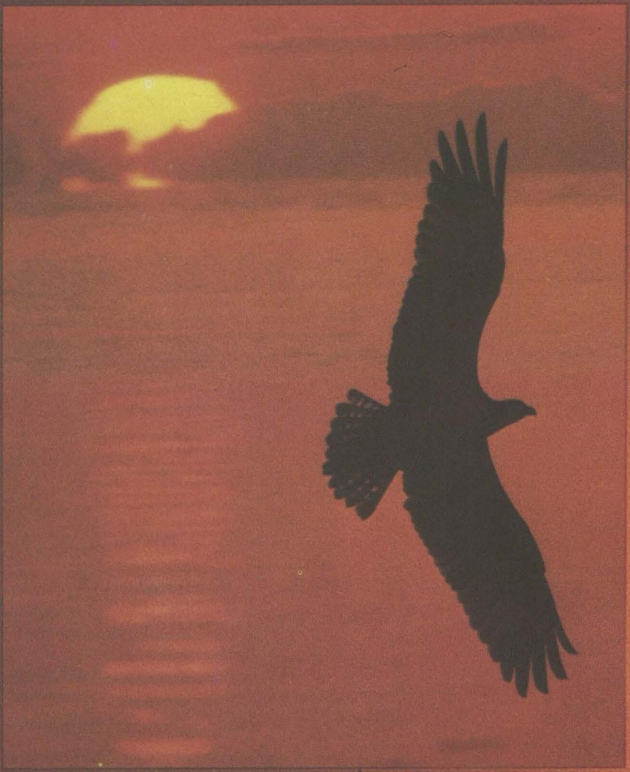
These exhilarating encounters only serve to prepare you for the thrill of feeling the bumpy, sinewy back of a nine-foot alligator sliding out from underfoot. We knew all along the big reptile was already full and probably wouldn't eat any of us, but when that "dead log" suddenly came to life, Steve still threw all the data forms into a tree. □

Flight

Mark Barrett, a regular free-lance contributor of outstanding nature photographs to FLORIDA WILDLIFE, turned his camera to the sky for this series of Florida birds in flight. The graceful, colorful splendor he captures here attests to his quick reflexes with a camera, his mastery of film and exposure, and a keen sense of aesthetics. Any photographer who has ever tried to catch a bird in flight knows the difficulty of the task.

The birds shown at left, from top to bottom, are a great egret, two sandhill cranes and a pair of ospreys in mating flight. At right, a gull soars against sunrays and clouds over Volusia County. ▷

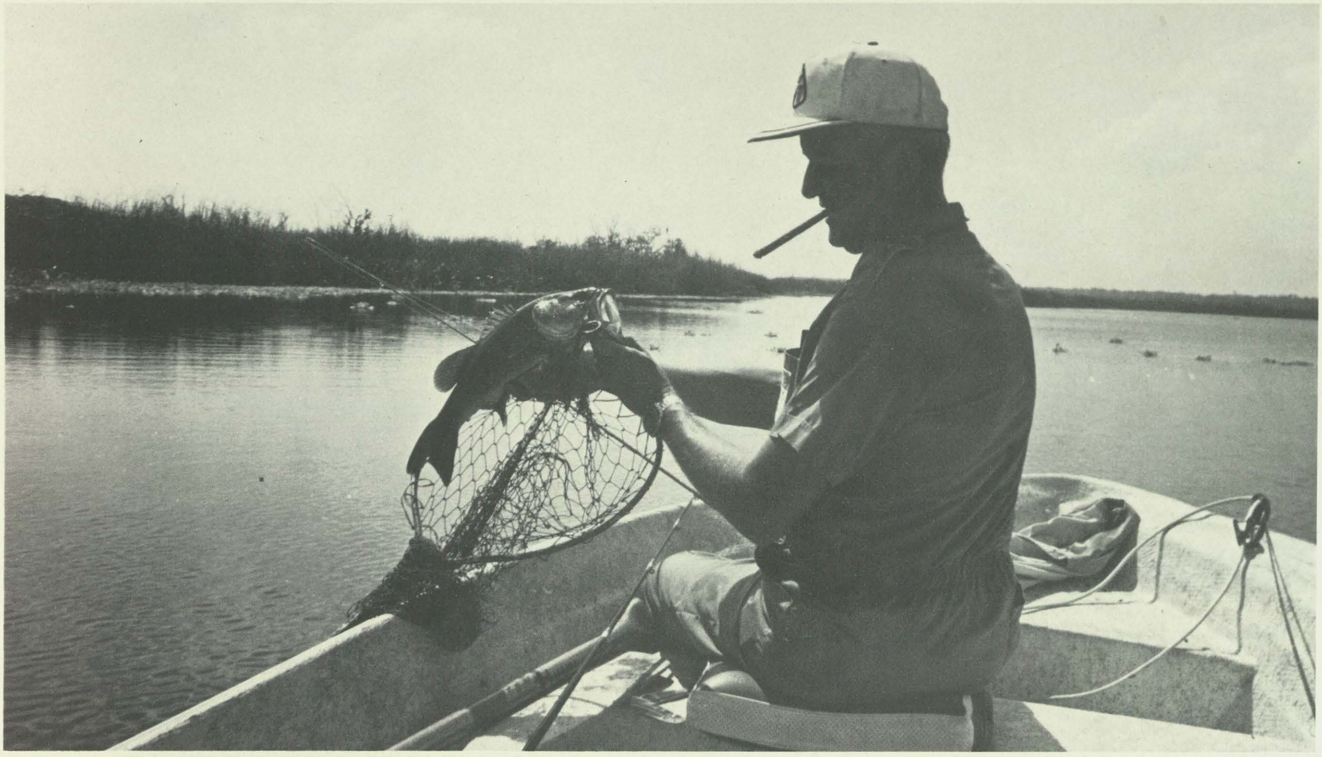




An osprey spreads its wings over the sea surrounding the Florida Keys.

A graceful line of sandhill cranes head for their evening roosts as the winter sun slowly sets.

A pair of ospreys flies high over the St. Johns River. □



Panasoffkee's bass will hit plastic worms. One successful fishing technique is to cast to holes in the emergent grass, and stay alert for pick-ups as the worm falls.

Bassing On Lake Panasoffkee

Text and Photographs
By Max Hunn

"What'll we do?" asked Buck Bray as he sat at the bow of his 18-foot boat. "Run for it, or ride it out?"

Tom Evans, a friend from Inverness, shrugged his shoulders and turned to look at me, where I sat in the stern seat. Both are close friends as well as top-notch, bass guides in west-central Florida. They're experts at guiding anglers to places where they catch nice wall mounts using live shiners as bait, and they're also adept at showing the technique for using artificial lures successfully.

We'd gone fishing on Florida's Lake Panasoffkee, even though the weather forecast had predicted a cold front about midday. As we expected some wind and rain, we were trolling shiners and had just located a concentration of bass holding near the edge of a large weed bed. I was wondering about the weather when they both said, "Well?" leaving the final decision to me.

"We've got rain gear and the fish are hitting," I answered. "It should be fast-moving at this time of year." I then asked Bray, "Do you think we can ride it out?"

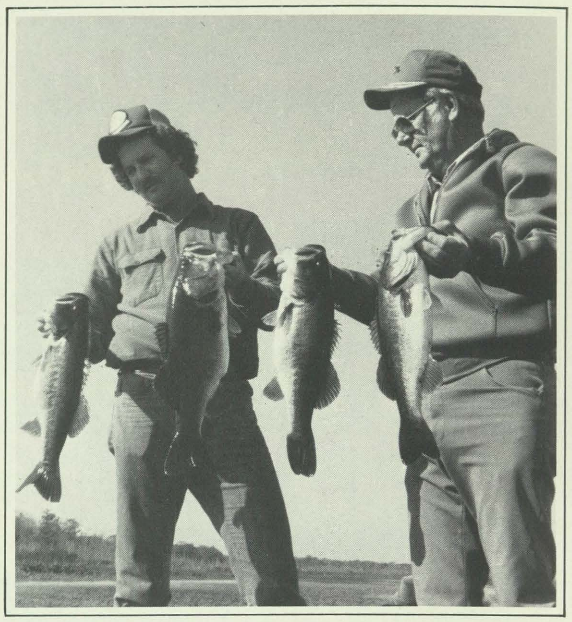
He nodded affirmatively. His 18-foot Ranger was definitely seaworthy, so I said, "Okay, let's keep on fishing."

It was agreed. Rather than run for the dock, which was about two miles away, we'd ride out the passage of the front and see what happened. As the first heavy drops of rain fell, heralding the front's approach, we donned our heavy-duty rain gear.

It's a good thing it was heavy-duty gear, for suddenly the skies opened and it rained *bucketfuls*. As it rained, the fish hit with fantastic speed, but within an hour and a half, the sun was shining brightly and the fantastic action stopped.

We were trolling three lines with live shiners, a deadly bait anywhere, ▷

"When we finished the trip, we had 17 bass in the live wells."



Tom Evans and Buck Bray compare four of the largest bass we caught.

particularly during cold months. But even considering the efficiency of shiners, our success was outstanding, providing ample evidence that Lake Panasoffkee is a surprising, if not too well-known, bass hole.

When we finished the trip, we had 17 bass in the live wells. As we counted and weighed them before releasing, we found we had one fish that weighted 6¾ pounds; one 5½; one 4¼; a pair of 4-pounders; and three in the 3-pound bracket. The eight fish totaled 33½ pounds. The other nine were in the 1½- to 2½-pound class. We released all of the big fish except one that was gut hooked, and we released all of the smaller fish.

Unusual fishing incident? Yes and no. Unusual in that we elected to brave the front, but usual for such a good string of bass to come from this lake. Panasoffkee is challenging; it has fish, but it isn't always this easy to catch them.

Oddly, Panasoffkee (which in the Seminole language means *deep valley*) is anything but deep. It averages five feet deep with a few holes that are as deep as 10 feet. Why the inappropriate Seminole name is a mystery. Physically, the lake has a shallow-saucer shape, gently sloping from the shore to a huge flat center. It has a conspicuous lack of structure and a superabundance of vegetation—factors which surprise first-time anglers here, and which upset fishing strategies.

The lake, covering some 4,500 acres, is approximately six miles long, and a mile wide. It has extensive marshes on its northern, eastern and southern shores. Civilization intrudes on the western shore, where numerous finger canals sometimes provide good angling.

Unlike some lakes, this one is blessed with moving water. It's fed by five creeks: Big Jones and Little Jones creeks on the northern end; and Warnell, Yellow Water and Panasoffkee creeks on the southern end. Several of these are spring-fed.

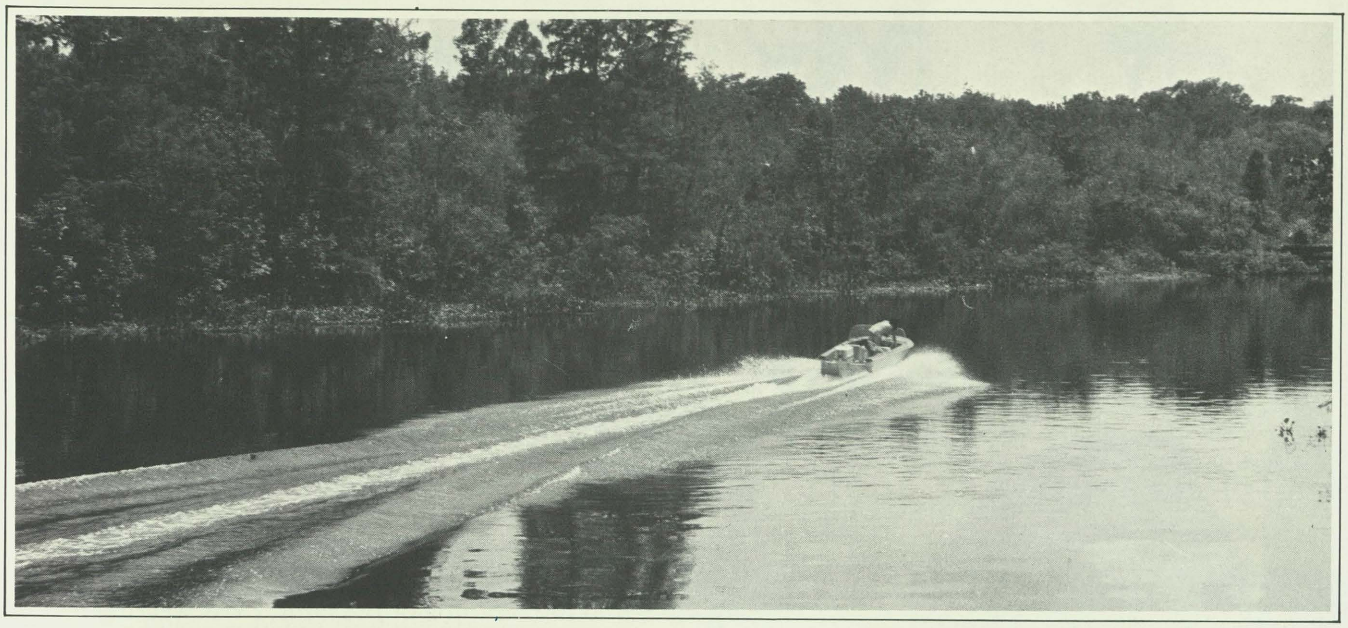
The lake's waters exit midway on the western shore via the Outlet River, which flows at a rate of two million gallons an hour. The Outlet River runs a short distance to join the Withlacoochee River at Princess Lake. This river is the "Withlacoochee of the South," which originates farther south in the Green Swamp. There is a "Withlacoochee of the North," which originates in Georgia and joins the Suwannee River in Florida not far from the Georgia-Florida state line. Eventually, the Withlacoochee of the South empties into the Gulf of Mexico near Yankeetown.

Lake Panasoffkee's record bass weighed 15 pounds, three ounces, reports Jim Veal, operator of Pana Vista Lodge. It was caught by Robert Norris while fishing with a live shiner.

While there's been no bass caught in recent years to challenge Norris's record, Veal says he has seen numerous big bass landed. Evans, who guides in west-central Florida, caught an 8-pound, 4-ounce largemouth on a black-grape plastic worm.

Morgan Boggs, who lives on the lake at Pana Vista Lodge Trailer Court, has landed several wall-mount bass. Boggs has landed fish weighing 8½, 9½ and 11 pounds, 1 ounce. His success is indicative of the lake's challenge. He caught his 9½-pounder with a wild shiner, but he landed the 8½ and the 11-1 using plastic worms. Oddly, the biggest fish was caught with a worm only four inchs long. However, most Panasoffkee worm fishermen prefer larger (7¼- to 9-inch) worms.

What probably confuses anglers more than the shallow shoreline of



The Outlet River links Lake Panasoffkee with the Withlacoochee River at Princess Lake. This lake is one blessed with moving water.

this lake is the fact that the biggest fish are usually caught in the center. With a lack of structure, this doesn't seem logical, but that's where you often find the big bass here. They take advantage of the abundant grass (predominantly hydrilla), and the lily pads, water hyacinths and eelgrass.

One of the secrets of this center-of-the-lake angling is to fish over submerged grass; not a difficult task most of the time. Panasoffkee is a rather limited lake for lure fishing. Ask veteran anglers their lure choices, and the odds are they'll recommend balsa-type, shallow-running minnows and plastic worms.

Evans says, "If I had to pick just one lure for Panasoffkee, I'd select a balsa shallow-diver such as Bagley's Bang-O-Lure, Rapala or an A.C. Shiner; either black and silver or black and gold."

On the other hand, Boggs and Bray, who often fish the lake when guiding, vote in favor of worms. Usually, they fish the worms without weights across weed beds. If they're using a light slip sinker, they cast to holes in the emergent grass, and stay alert for a pick-up as the worm falls. The bass have a habit of hitting lightly as the worm drops. If you aren't alert, you can miss many pick-ups.

Because of the unusual physical make-up of the lake, there's no dramatic change in fishing locations during the year, says Veal. The fish can't move very much, but there are subtle variations which can influence fishing success.

Veteran Panasoffkee anglers say from January to March is generally regarded as the prime fishing period. You can find the fish in two to three feet of water under heavy cover. Many anglers prefer to freeline shiners under the cover with stout tackle.

This is also a good period for plugging, with balsa lures rated number-one for casting over submerged grass beds. Some prefer black and silver or black and gold Rapalas or A.C. Shiners, while others like the tiger-stripe Bang-O-Lure. At times, top-water floaters such as Tiny Torpedo, Devil's Horse, Johnny Rattler and similar lures are productive. Preferred plug colors are natural-perch and yellow-frog. You also can use worms, with darker colors being preferred.

The April to June period is the prime time for top-water fishing Veal says. "It is also an excellent time for using a fly rod with popping bugs," he adds.

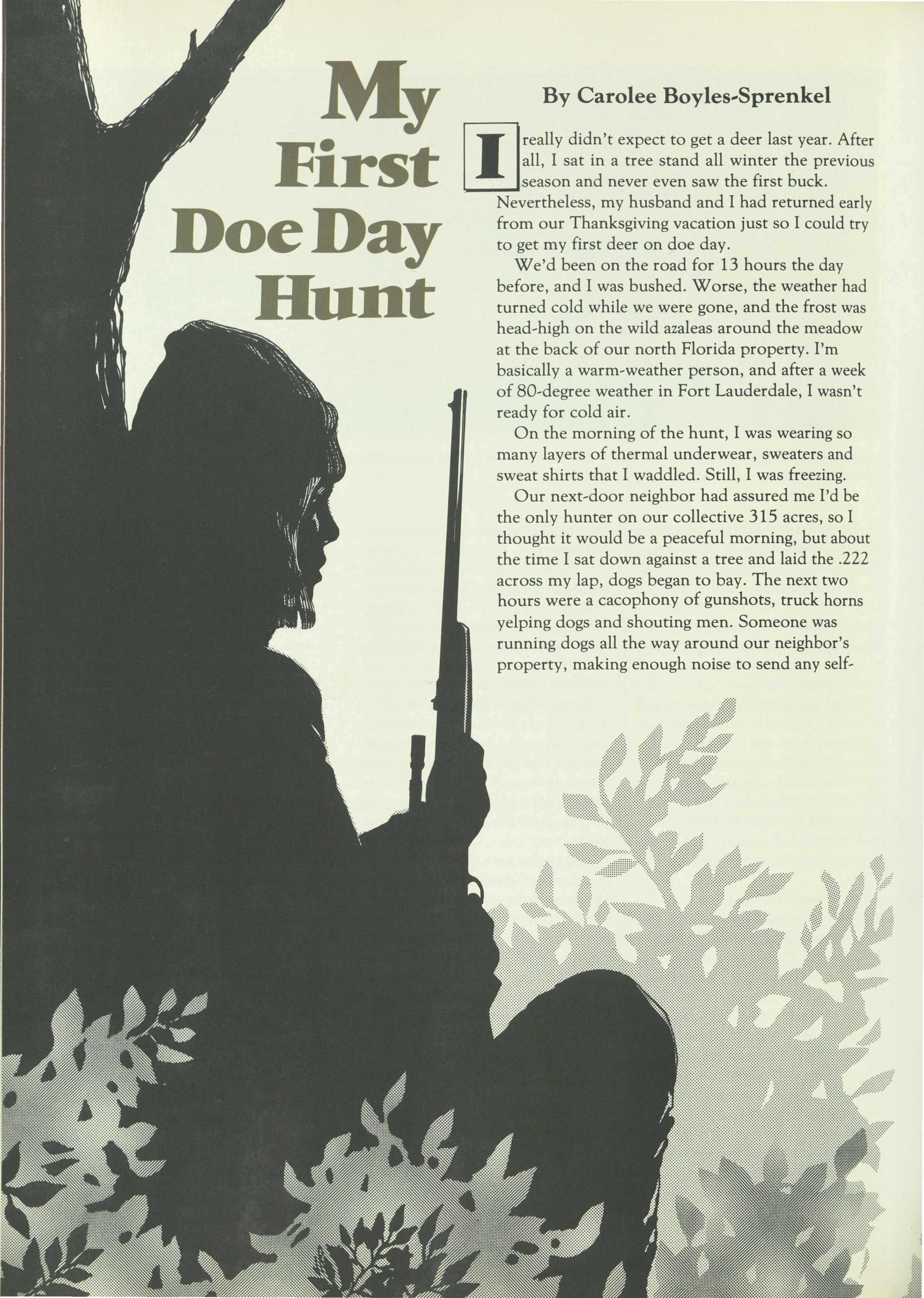
The most productive lures are the same as for the first quarter of the year, although anglers find the bass will hit a wider variety of colors. It's important to discover what sort of retrieve they want by trying a variety when you first start fishing. Sometimes the bass hit a fast retrieve; on another day, they'll want a slow one. You have to experiment.

During July to September, the lake's water level often changes, causing the fish to move. You may have to hunt for them more than usual then.

During the last quarter of the year, the bass often school, depending upon how the shad population has developed earlier in the year. Often the shad schools grow rapidly, and the bass chase these prize dinner morsels with abandon. Top-waters are very effective with schooling bass.

The lake is also well-known for its panfish. When bream and shellcrackers are bedding, cane pole anglers get the word in a hurry, and the lake sees plenty of action.

This lake is a fishing challenge; a little-publicized bass hole, where big fish lurk if you can adjust your techniques to this shallow saucer of water. Next time you visit Sumter County, why not try your luck? □



My First Doe Day Hunt

By Carolee Boyles-Sprenkel

I really didn't expect to get a deer last year. After all, I sat in a tree stand all winter the previous season and never even saw the first buck. Nevertheless, my husband and I had returned early from our Thanksgiving vacation just so I could try to get my first deer on doe day.

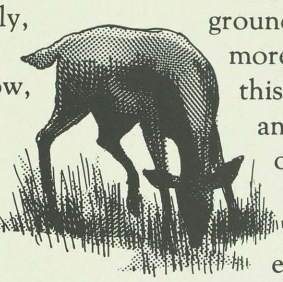
We'd been on the road for 13 hours the day before, and I was bushed. Worse, the weather had turned cold while we were gone, and the frost was head-high on the wild azaleas around the meadow at the back of our north Florida property. I'm basically a warm-weather person, and after a week of 80-degree weather in Fort Lauderdale, I wasn't ready for cold air.

On the morning of the hunt, I was wearing so many layers of thermal underwear, sweaters and sweat shirts that I waddled. Still, I was freezing.

Our next-door neighbor had assured me I'd be the only hunter on our collective 315 acres, so I thought it would be a peaceful morning, but about the time I sat down against a tree and laid the .222 across my lap, dogs began to bay. The next two hours were a cacophony of gunshots, truck horns yelping dogs and shouting men. Someone was running dogs all the way around our neighbor's property, making enough noise to send any selfrespecting deer into hiding deep in the swamp.

I was cold, and so sleepy I could barely keep my eyes open. I kept leaning against the tree, dozing several minutes at a time. Finally I got disgusted with the whole thing and decided to go back to the house for an hour's nap, then return after things quieted down.

Just before standing up to leave, I glanced across the meadow one more time. My sleepy eyes perceived a doe standing motionless at the edge of the trees, less than 100 yards away. Suddenly, I wasn't nearly so cold and sleepy. The deer was casually strolling across the meadow, pausing now and then to browse.



I managed to click the safety off and shoulder the rifle to aim through the scope, but I was shivering and shaking so much, that for a while, I couldn't find the deer in the scope. Finally I located my game, still grazing, took about six deep breaths, tried to steady the gun and slowly squeezed the trigger.

When I looked over the scope, the deer was calmly gazing back at me. "Fall down!" I thought. "Fall down!"

I was so excited I could hardly breathe. Finally the deer looked away and I started to lower the gun to reload. It looked back at me and I froze. We played peek-a-boo for what seemed like an hour before I could finally lower the rifle back into my lap.

Slowly, I eased the bolt back, afraid the slightest sound would spook the deer. The spent shell casing snapped out, landed on the ground and I made sure another shell slid into the chamber.

The deer was still grazing. This time I was able to hold the rifle a little steadier, but when I squeezed the trigger, nothing happened. Not even a click! Carefully, I tried again. Bolt back, chamber shell, close bolt, aim, squeeze. Nothing!

About that time I figured out what was wrong. Previously, I had only fired the rifle at stationary targets, when it wasn't necessary to be quiet. Trying so hard to keep the deer from hearing the gun's action, I wasn't drawing the bolt back far enough to cock the action.

By then, the deer had wandered back into the trees, so I yanked the bolt back and slammed it closed again—realizing the shell that was in the chamber was the last one in the clip. I knew I would never find any of the ejected shells on the ground in time to try again, so I threw up the gun, found the deer in the scope and fired.

When I looked up, the deer had vanished from sight. I couldn't figure out what to do. I didn't know whether to sit still for a few minutes to see what would happen next, or to walk over and look for it. I was so excited, I couldn't even decide if I should carry the rifle unloaded or loaded. I must have loaded and unloaded that rifle three times while trying to decide if I'd missed again, or made a hit. I was still shaking from the cold like a twig in a high wind.

Slowly, I approached the far side of a small loblolly pine, then saw a flicker of white on the ground. Then, I eased up to the tree and I saw more white. I figured the deer had decided this was a good place to lie down and rest, and if it heard me coming, the last I'd see of it would be a flying white flag. But when I peeked around the pine, the deer was lying still on the ground. I eased around the tree a little more, poked it with the gun barrel, then I was sure it wasn't going anywhere unless I carried it.

When I looked closely, I saw the "doe" I was hunting had two little antlers, neither one as long as my little finger. I had shot a buck! What an unexpected realization!

Having scored, I next wondered, "Now that I have it, what do I do with it?" I fished around in my jacket pockets, found a piece of nylon rope, tied it around the buck's neck, then started off across the meadow. About halfway back to where I'd been sitting, I stopped. Where did I think I was dragging the thing anyway? The truck was out by the highway, more than a quarter-mile away. I certainly wasn't going to drag the deer that far when I could drive right up to it!

Getting the buck loaded in the truck was another challenge. My first game plan was to open the tailgate and try to lift him onto it, but I couldn't lift him off the ground. Next, I tried letting the tailgate all the way down, climbing into the truck and hauling him up with the rope. That worked fine until I got him almost up and the rope broke, nearly pitching me backwards over the cab. I tried again to lift him onto the tailgate, but no luck. He hadn't lost any weight since the first attempt.

The novelty of actually bagging my first deer was starting to wear off by then, and my mind was beginning to function again. I then remembered a new nylon rope was somewhere in the truck.

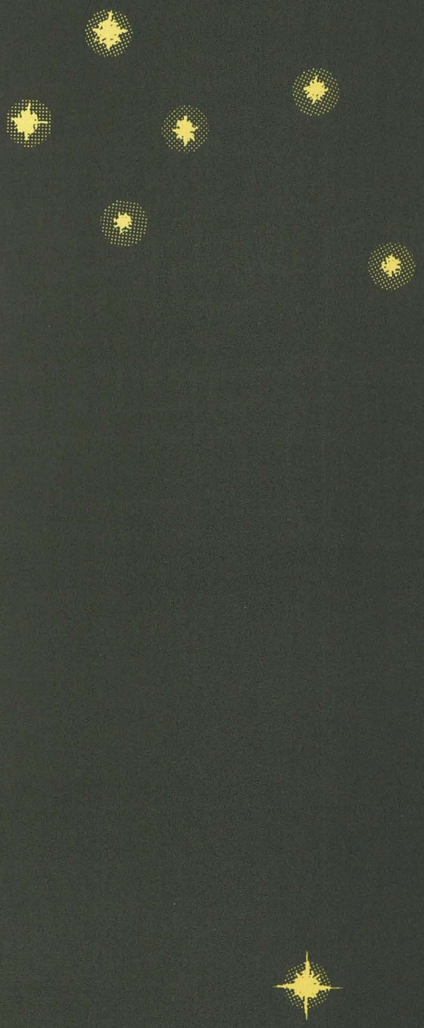
I found it lying on the floor, in plain sight, where it would have bitten me if it had teeth. That rope didn't break, so at last I loaded the buck without any more trouble.

Now, if I can just find a nice fat turkey that will hold still long enough... □

CASSIOPEIA

A North Star Neighbor

By David K. Voigts, Ph.D.



The ability to use Polaris, the North Star, to determine your directions when disorientated at night is an important skill which should be learned by all outdoor enthusiasts, but unfortunately in much of Florida, the Big Dipper is below the northern horizon for at least part of most nights as it circles the North Star.

As one travels southward, the North Star and its Big Dipper companion gradually sink below the northern horizon and become less useful as navigation aids. By the time the equator is reached, the North Star disappears from sight completely.

The time of night the Big Dipper is visible changes from season to season because of the earth's annual orbit around the sun. During fall and early winter, the Big Dipper does not rise into view until after midnight.

During these times when the Big Dipper cannot be seen, there is no need to be lost, for another easy-to-learn constellation takes its place as an aid to locating the North Star. This constellation is *Cassiopeia*, the Queen. Its five brightest stars form an *asterism* (grouping of stars) which resembles the letter M, if you use your imagination a bit.

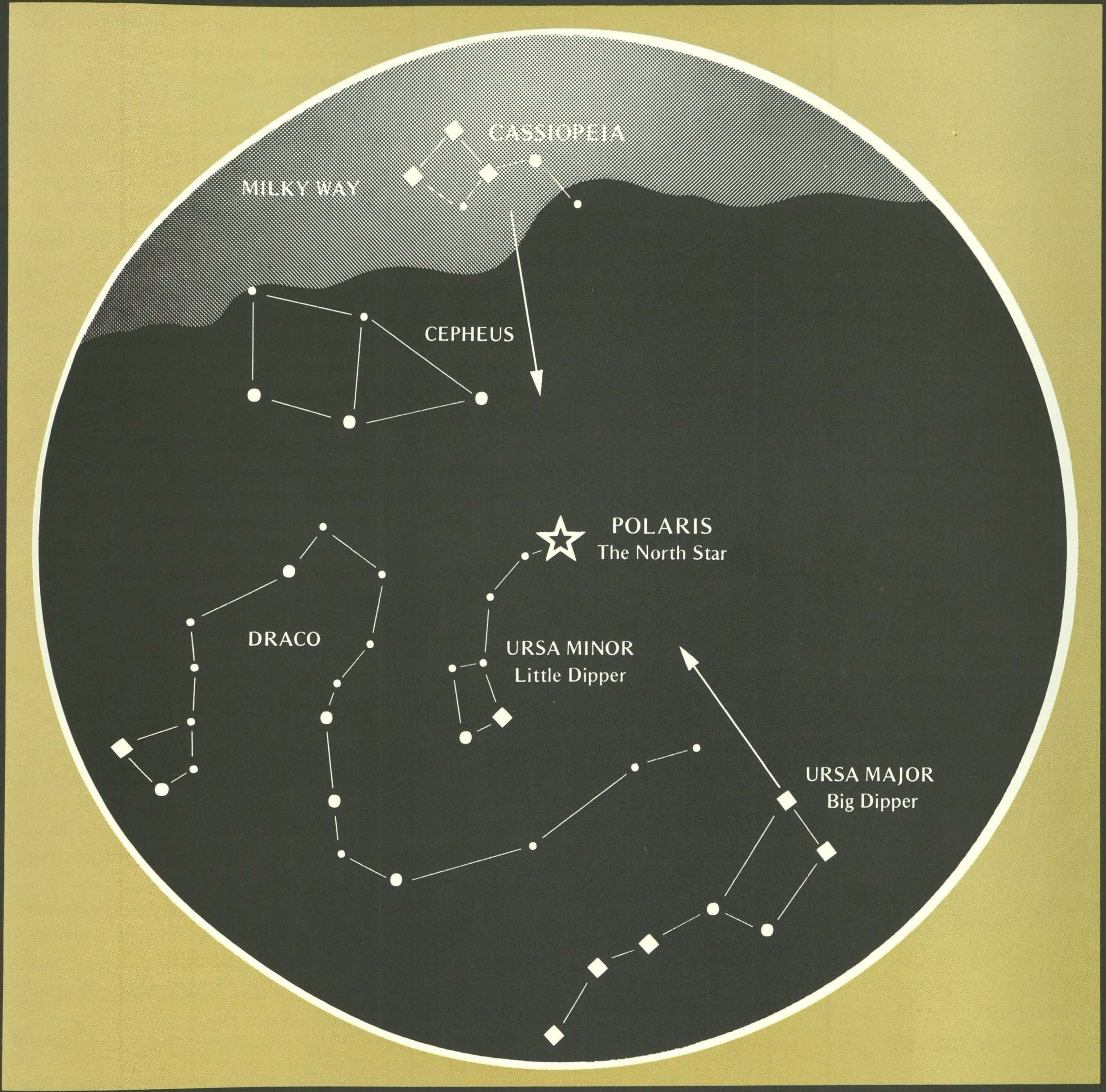
Although it sometimes appears to stand on end, the bottom of the M always points generally toward the North Star. The M is not a precise pointer, but the North Star is the brightest star in that portion of the sky.

The North Star is not brilliant, although there is a common misconception it is the brightest star in the sky. The North Star is actually only a 2nd-(second) magnitude star.

Star brightness is measured on a "magnitude" scale. A 1st-magnitude star is 100 times as bright as a 6th. Three of the stars forming Cassiopeia are also about 2nd-magnitude in brightness.

Cassiopeia appears from Earth to circle the North Star, as does the Big Dipper, and it appears to be about the same distance away, but on the opposite side. It is about half as long as the Big Dipper and the M is about as tall as the bowl of the Big Dipper but, there are only short periods when both Cassiopeia and the Big Dipper are visible at the same time. When the Big Dipper is visible low in the northeastern or northwestern sky, its pointers will point through the North Star to Cassiopeia.

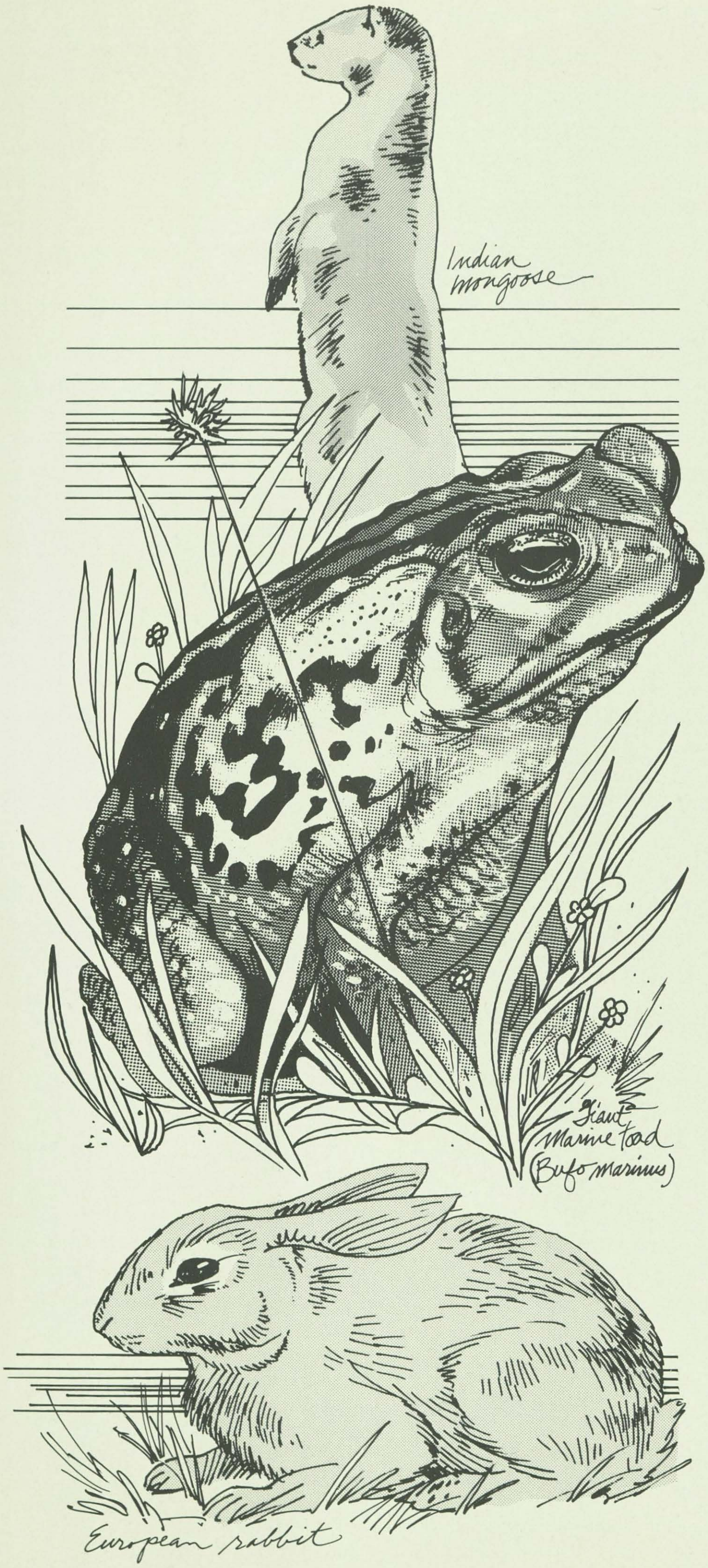
Once it has been learned, Cassiopeia could help calm any panic that might grip you, should you become disoriented and have to search the star-filled sky for a Big Dipper that isn't there. □



In much of Florida, the Big Dipper is below the northern horizon for at least part of most nights as it circles the North Star. The time of night the Big Dipper is visible changes from season to season because of earth's annual orbit around the sun. During these times, Cassiopeia can be used as an aid in locating the North Star. It forms an "M" and the bottom of the "M" points to the North Star.

It's The Law

By Dave Swindell



Since exotic (foreign) animals are not part of Florida's native wildlife, why is the Commission concerned with them? What authority does the Commission have to control them?

The release of exotic wildlife species can be hazardous to native wildlife through disease transmission, competition for food and habitat or by predation. An example of how an exotic species can be detrimental to a native species occurred on certain islands of the West Indies many years ago when the Indian mongoose (*Herpestes ichneumon*), a slender, ferret-like carnivore was released there. This exotic animal became established and, in so doing, the mongoose effectively destroyed many ground-nesting birds and other valuable native animals living there.

Occasionally, an exotic species adapts to a new environment too well and becomes a serious pest. This occurred in Australia, following introduction there of European rabbits (both the brown hare and the old world rabbit). These exotics wrought havoc on the continent's agricultural crops and pastures. Since their introduction, these exotic rabbits have successfully resisted all control efforts, and they remain a plentiful pest.

Some introduced species, such as the poisonous marine toad (*Bufo marinus*), now common in portions of southeast Florida, are a potential threat to human safety. This giant toad exudes a milky glandular fluid which may injure humans if it contacts their eyes. This species has also been documented as a cause of death to dogs which attempted to catch it in their mouths.

Even when confined, some foreign species may be a definite threat to human safety unless proper measures are taken to protect the public.

The Commission's authority to control and regulate exotic animal species is spelled out in Florida Statutes, Sections 372.265 and 372.921 (enacted in 1970); and from its responsibility under the Florida Constitution to protect native wildlife.

Section 372.265 forbids the importation or release of any exotic animal without a permit from the Commission. Permits may be given only after study to determine "any detrimental effect the species might have on the ecology of the state."

Sections 372.921 and 372.922 require permits for keeping any captive wildlife. These laws are intended to ensure captive animals are humanely treated, protected from danger and do not pose a threat to humans.

Constant vigilance is essential to ensure that additional undesirable exotic species do not become established in Florida; and that caged animals do not escape captivity or cause injuries to people or our natural resources. □

Hunter Education News

By Lt. Byron Stalvey
Hunter Education Officer

Hunter-Orange Saves Lives!

Flourescent orange hunting clothing has been available for 20 years, and has even gained a traditional status among the gear of many hunters. Yet, some hunters are still skeptical and resist wearing this important safety material. If you're in this minority, these facts from the National Shooting Sports Foundation should change your mind:

1. Fluorescent orange is the most easily seen, recognized, bright, unnatural color against a natural background. It is the safest color for hunters to wear under all weather and light conditions.
2. Almost 10 percent of all hunters have color vision deficiencies. Red clothing is no longer recommended because red may not be seen by those hunters who cannot distinguish colors correctly, and because red is difficult to see in low light.
3. Accidents in which the victim was mistaken for game rank very high on the list of the most common types of hunting accidents that occur in most states. States which have mandatory hunter-orange dress laws have had a dramatic decrease in mistaken-for-game accidents. Many states have experienced a reduction of 50 percent; others by even more. There is no question these sharp reductions in mistaken-for-game accidents are a direct result of hunter-orange clothing being worn in the field.
4. There has been no decline in hunters' bagging success in those states which have mandatory hunter-orange regulations.
5. Hunter-orange clothing is a tremendous aid in helping hunters maintain visual contact with one another, particularly when moving through dense cover or woods. Experienced hunters are keenly aware that, unless they know where their partners are at all times, they cannot determine safe zones of fire. Any hunter who has seen nothing more than a patch of orange out of the corner of his eye knows full well the value of fluorescent orange in helping everyone keep track of one another while in the field.

Hunter-orange has been defined as fluorescent orange with a dominant wavelength of 595 to 605 nanometers, a purity of not less than 85 percent and a luminance factor of not less than 40 percent. Clothing not meeting these standards is less effective. Hunter-orange garments that have faded should be replaced.

There are now 34 states and Canadian provinces which have instituted mandatory hunter-orange regulations.

Hunter-orange is recommended for small game hunters as well as big game hunters. It's no fun being peppered by shot while quail or dove hunting. Bow hunters should also consider wearing hunter-orange, at least on their way to and from their stands.

Turkey hunters can put up a hunter-orange turkey blind identification marker for their safety. This can be done simply with some fluorescent orange tape, wrapped barber pole style around a nearby tree. This simple device alerts other hunters to your location. Flourescent tape is inexpensive and can be purchased at most hardware stores.

Make your whereabouts known to other hunters—wear hunter-orange!

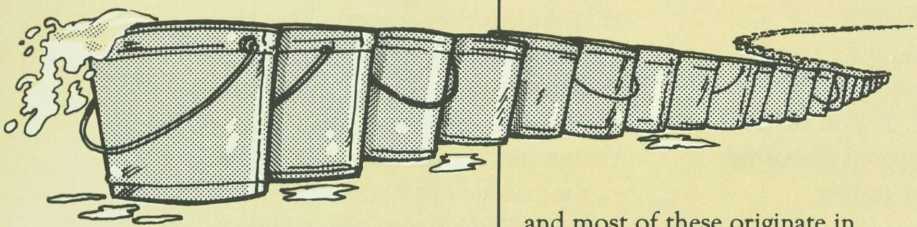
Editor's Note: If you would like more information on hunting safety, contact the Commission office nearest you about enrolling in our free hunter education program. Regional office telephone numbers are listed on page 48, and your local telephone directory should list your nearest Commission office in the front of the directory. □

Conservation Scene

Compiled by Arienne Wallace

Facts About Florida's Rivers

Which is the largest river in Florida? Is it the Apalachicola River or the St. Johns River? Both, Commission fisheries biologist Gray Bass says. "It all depends on how you measure rivers."



In terms of the average volume of water flow, northwest Florida's Apalachicola River is the king of Florida streams, he said. It discharges about 185,000 gallons of water per second on the average. Second by volume is the Suwannee River, in the north-central portion of the state, which averages a flow of approximately 80,000 gallons per second. The Choctawhatchee, east of De Funiak Springs, is third.

The St. Johns River is the longest river flowing entirely within Florida. It begins south of Melbourne, flows north and empties into the Atlantic Ocean near Jacksonville. The St. Johns River includes 318 miles of riverine marsh, winding channels and estuaries, Bass said.

About 100 miles of the Apalachicola River flow within Florida. This mighty system flows southward from the Appalachian Mountains in Georgia, a downhill journey of 500 miles. The Suwannee River, with 207 miles in Florida, is second longest in terms of intrastate length. Another 38 miles of the scenic Suwannee are in Georgia, where this famous river begins.

As head of river fisheries research at the Commission's Blackwater Fish Hatchery in Holt, Bass has learned a great deal about Florida's streams. He said the state contains approximately 1,700 streams, ranging in size from small spring-fed creeks to large rivers. Total length of all Florida streams is about 10,550 miles. Most of Florida's major rivers are located in the north and northwest sections of the state and most of these originate in Georgia and Alabama.

Considering physical, chemical and biological characteristics, Florida rivers can be roughly divided into two basic groups. Rivers of the panhandle generally possess naturally demineralized, nutrient-poor waters and have low fish and plant productivity. Streams of the peninsula are nutrient-rich, mineralized and are relatively more productive than northwestern rivers, Bass explained.

On the other hand, panhandle streams have more fish species than peninsular rivers have. Approximately one-half of all native freshwater fish species known to inhabit Florida occur only in the north or northwestern area of the state.

Bass said virtually all Florida streams of any size support active sport fisheries. The panhandle is especially blessed with many relatively undisturbed, scenic rivers.

"How long our rivers remain productive and attractive will depend upon how well we preserve water quality and upon our success in preserving instream habitats," Bass predicts. "Long-term survival of our rivers requires streamside land conservation as well, to prevent excessive soil erosion and silt runoff into streams, and to prevent removal of shoreline cover needed by fish and other aquatic life." □

Raptors Are Master Hunters

The peregrine falcon dives at its prey at an incredible estimated speed of 200 miles per hour. An instant later, flying fur or feathers confirms the hunter found his mark.

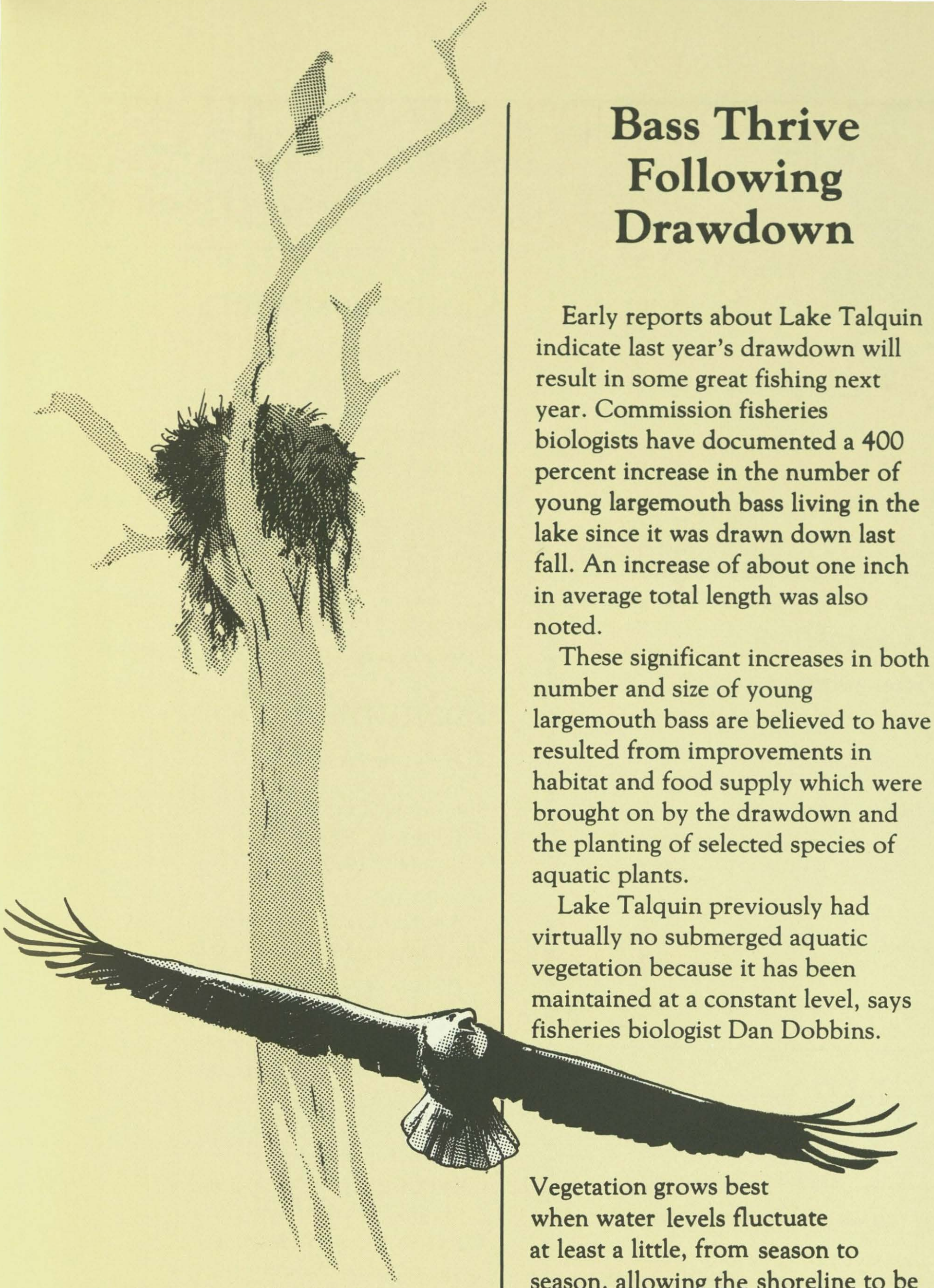
What a human can see from 200 yards, raptors (birds of prey) can spot from two miles. Their strong curved beaks, sharp talons and coordinated flight adapt them for overcoming prey. Florida's birds of prey are part of the natural balance which sustains the state's wildlife. Depending on the species, they may feed on fish, mammals, birds, reptiles, insects or snails. In many ways, birds of prey serve the human population by feeding on undesirable rodents such as rats and mice and by scavenging.

"They are at the top of the food chain," says Commission wildlife biologist Anne Wenner. "Anything that contaminates the food chain beneath them may eventually work its way up to raptors." Birds of prey are among the species which are most vulnerable to environmental changes brought on by humans.

Florida's resident and migratory birds of prey include southern bald eagles, hawks, owls, falcons, one species of the caracara and osprey. Some hunt during the day; others at night. Some do both. Some raptors soar through the sky in search of prey; others patiently wait on perches, using their remarkable eyesight to scan the landscape for any sign of a meal.

"Some of Florida's birds of prey are year-round inhabitants," Wenner said. "Others merely migrate through here en route to and from South America, where they spend the winter."

Florida is a great place to enjoy winter birdwatching if you appreciate the breathtaking sight of migrating birds of prey, hunting as



they are adapted to do. The Dry Tortugas of the Florida Keys is the final stop for many raptors and other birds before they embark on their long flights across the Caribbean Sea to escape winter's chill.

Interested birders can obtain additional information about our magnificent birds of prey by contacting the National Wildlife Federation, 1412 16th Street, N.W., Washington, DC 20036. The telephone number is 202/797-6850.

Anyone interested in the ancient sport of falconry can obtain permit information and forms from the Game and Fresh Water Fish Commission, Division of Law Enforcement, 620 South Meridian Street, Tallahassee, FL 32301. □

Bass Thrive Following Drawdown

Early reports about Lake Talquin indicate last year's drawdown will result in some great fishing next year. Commission fisheries biologists have documented a 400 percent increase in the number of young largemouth bass living in the lake since it was drawn down last fall. An increase of about one inch in average total length was also noted.

These significant increases in both number and size of young largemouth bass are believed to have resulted from improvements in habitat and food supply which were brought on by the drawdown and the planting of selected species of aquatic plants.

Lake Talquin previously had virtually no submerged aquatic vegetation because it has been maintained at a constant level, says fisheries biologist Dan Dobbins. Vegetation grows best when water levels fluctuate at least a little, from season to season, allowing the shoreline to be alternately flooded and dried, Dobbins added.

Plots of peppergrass, an aquatic plant that freely grows in many Florida lakes, were transplanted to Lake Talquin last summer while the lake was drained. Most of the new peppergrass was planted where it would be covered by one to three feet of water, but some was placed so as to be covered by depths of four to five feet when the normal level was restored.

Small fish live in the grass, and feed on microscopic plants and animals associated with it, Dobbins said. In turn, game fish such as largemouth bass thrive on these smaller fish. This adds up to a great expectation for next year's bass fishing on Lake Talquin. □

Another Florida Panther Killed

Another rare Florida panther has died, and a south Florida man was arrested and charged with the killing. Elmer Brooker, 56 of West Palm Beach, allegedly shot the endangered animal on October 20 while hunting in the J. W. Corbett Wildlife Management Area, investigating wildlife officers said.

Commission wildlife officers also seized a double-barrel muzzleloading shotgun, a vehicle, clothing and the female panther's carcass.

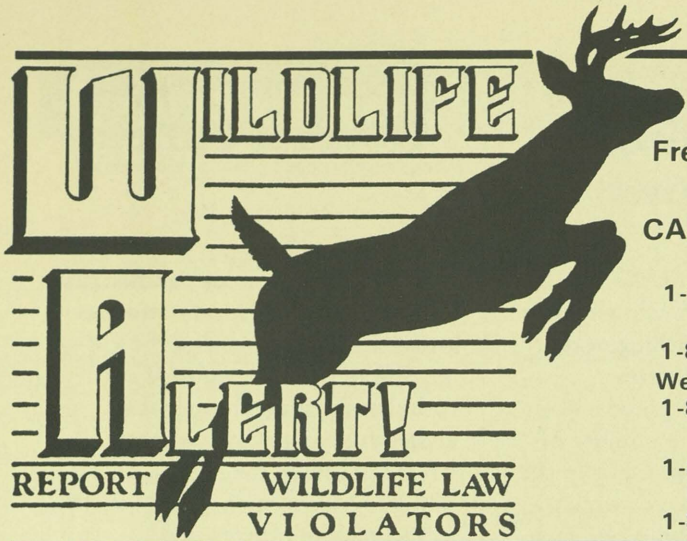
The 1984 Florida Legislature passed a bill, which Governor Bob Graham signed into law, that makes it a third degree felony to kill a panther in the state. The new law provides for a maximum penalty of five years imprisonment and/or a $5,000 fine.

"It's just so tragic when a panther dies—particularly in a case like this one," Colonel Robert M. Brantly, the Commission's executive director said. "Florida panthers are one of the most endangered mammals in the world, and when one dies, a big slice of Florida's natural heritage dies with it," he added.

Although the number of Florida panthers is unknown, wildlife experts have documented less than 30 in south Florida, where nearly all the remaining big cats live. □

Florida Wildlife's Assistant Editor

This issue marks five years of service to FLORIDA WILDLIFE by Assistant Editor Trish Spillan. She first joined the regular magazine staff as an editorial and production advisor when the November-December 1979 issue was published. Later, she served as editorial assistant before being appointed to serve as assistant editor at the time the September-October 1982 issue was published. □



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Floridana

Throughout Florida, hidden remains of early pioneer towns lie scattered through the woods and near old abandoned fields. In the early days of white settlement, towns might exist only a few years before they became mere "ghosts."

Norwalk was one of these early pioneer settlements, prior to about the turn of the century. It was a farming community with its own U.S. Post Office, stores, houses and at least one church. Citrus growing was a significant part of the economic base there, and the fruits of orange, tangerine and grapefruit trees were shipped by steamboat from loading docks at the nearby St. Johns River to Jacksonville. From there, the fruits went north.

In the winter of 1895-96, a killer freeze hit the state's citrus groves especially hard in the north-central region. For Norwalk's groves, it meant death to the trees and an end to prosperity.

Shown here is a reproduction of an actual shipping label that was used to identify crates of Norwalk's citrus fruit purchased on contract by Moore Brothers of Norristown, PA. The original is in color, printed from handworked engravings. This label is from the Jess Davis collection of early Florida history.

Today, there are no signs nor maps identifying Norwalk, but the area has a few recently-built homes and hunting camps. This hunting season, like so many before, hunters will take to the woods to look for deer as they run through the brushy areas that once were within Florida's northernmost citrus belt.

—John Waters Jr.